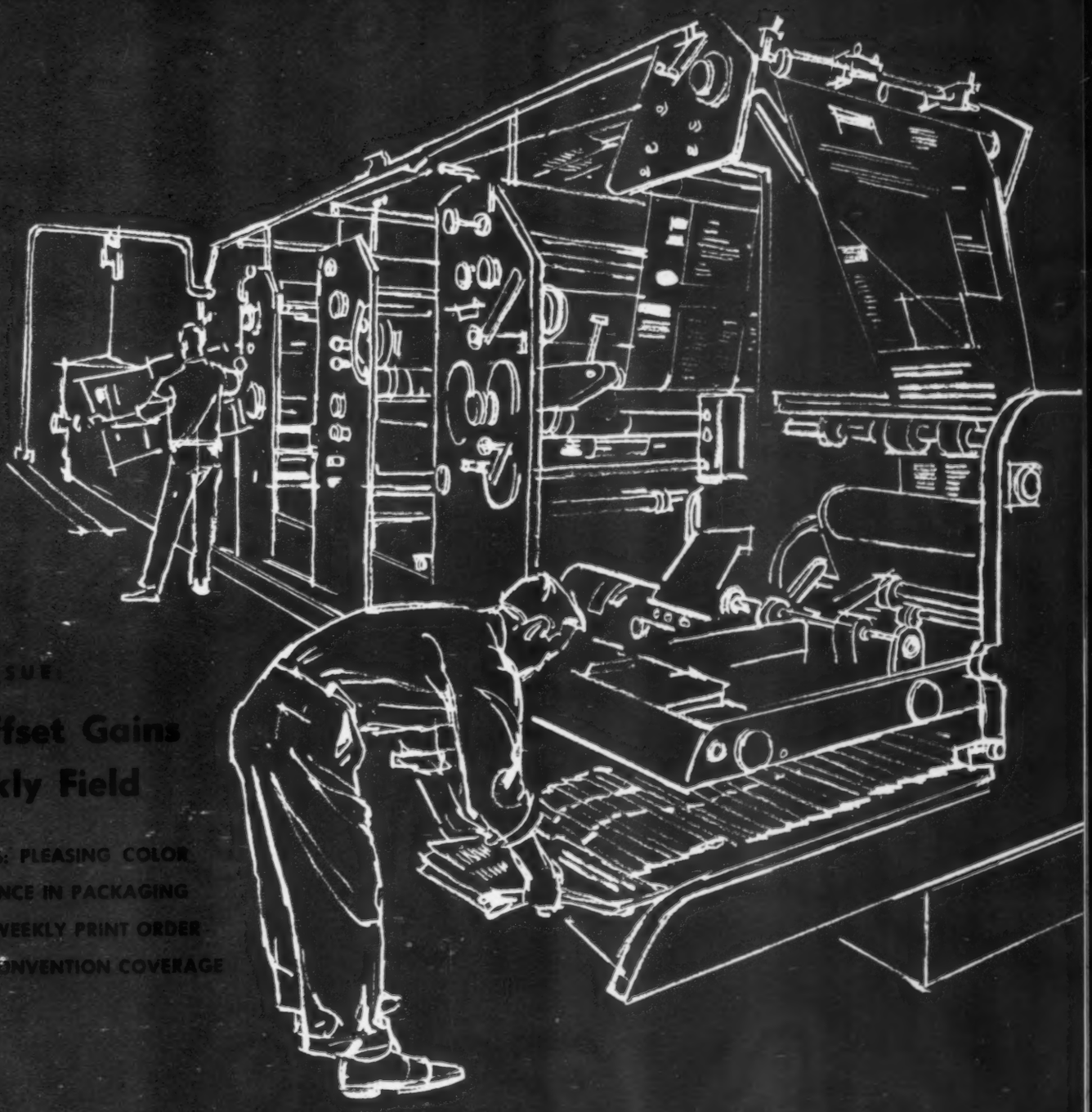
PRINTING PRODUCTION

SEPTEMBER 1960



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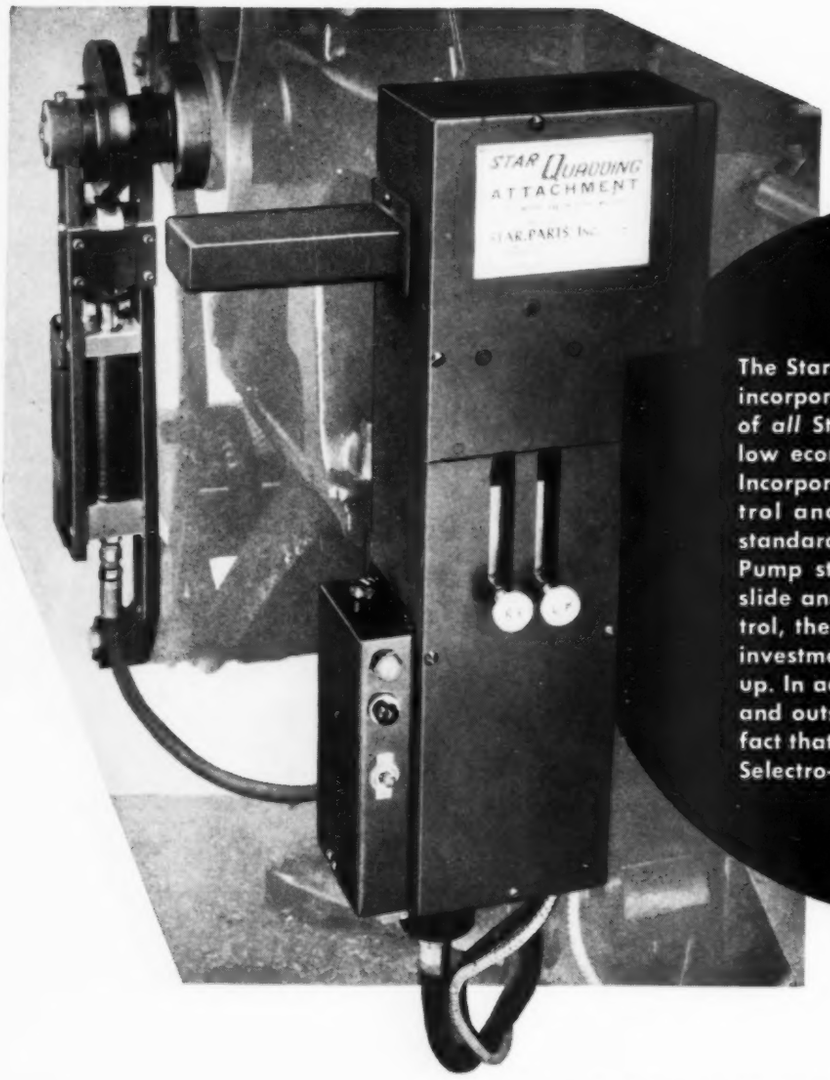
Web Offset Gains in Weekly Field

A NEW SERIES: PLEASING COLOR
LITHO'S ADVANCE IN PACKAGING
7½ MILLION WEEKLY PRINT ORDER
CRAFTSMEN CONVENTION COVERAGE

THE PRODUCTION MAGAZINE FOR PRINTERS AND LITHOGRAPHERS

VERSATILITY AND
RELIABILITY AT A
LOW INVESTMENT COST

THAT'S THE STAR **ECONOMY** QUADDER



The Star Economy Quadder (Model G) incorporates all of the basic principles of *all* Star Quadder Models but at a low economy price.

Incorporating a push-pull selector control and hydraulic actuation, plus standard features such as the Electro-Pump stop safety, "No-Set" delivery slide and left-hand vise jaw dial control, the Star Economy Quadder is an investment you can't afford to pass up. In addition to its economical price and outstanding dependability, is the fact that it can be built up later to full Selectro-matic flexibility if required.

Why not get the full story without obligation, now? Start by writing for this "tell-all" folder today.

Precision TRADE ★ MARK Parts

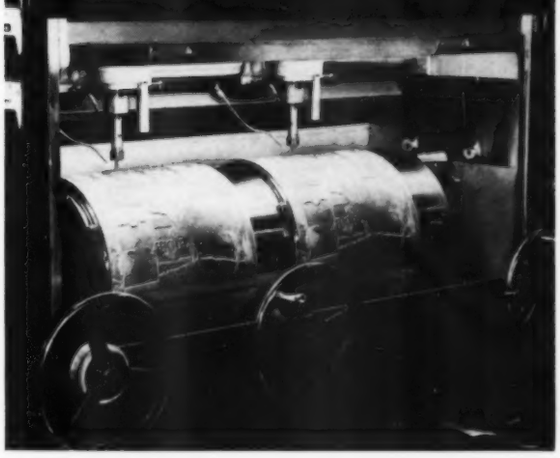
STAR PARTS, Inc.

SOUTH HACKENSACK, N. J.

BRANCH: 1327 BROADWAY, KANSAS CITY, MO. **AGENCIES:** CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER SO. ACTON, MASS. • STAR PARTS (LINECASTING) CANADA LTD. MONTREAL AND AGENTS OVERSEAS

For More Information Circle 167 on Reader Service Card

"OK"



CINCINNATI ENQUIRER:

"Our new Sta-Hi Twin-Plate Router has met every requirement and hope we had for it. Because of the ease of working the router and the smooth performance of the machine, the stereotypers have readily accepted it as a great improvement."

H. E. Drafahl, Production Manager

INDIANAPOLIS NEWSPAPERS:

"The Sta-Hi Twin-Plate Router has proved a very satisfactory addition to our operation. Maintenance has been a very small item and, in our opinion, the unit has been engineered exceptionally well. We are more than happy with this equipment."

John E. Innis, General Foreman
Stereotype Department

OKLAHOMAN & TIMES:

"We have used the Twin-Plate for over a year and are happy to tell you it has met every production requirement we thought it would. Color plate routing is no longer a bottle-neck in our stereotype department. The Twin-Plate has cut this routing time by almost half. We are entirely satisfied with this well-designed machine."

Robert H. Spahn, Production Manager

SALT LAKE CITY NEWSPAPERS:

"The Twin-Plate Router is a wonderful addition to our stereotype department . . . It is living up to all expectations. We wonder how we have managed to get along without it. It is a very fine piece of equipment."

Milton A. Brown, Production Manager

SAN DIEGO UNION & TRIBUNE:

"The Twin-Plate Router is doing a fine job for us... The operators have developed a high degree of skill in a very short time and appear to like to work with the machine...In short, we are quite satisfied that the Twin-Plate Router will do all that was claimed for it."

B. G. Burke, Production Manager

TULSA WORLD & TRIBUNE:

"We and our complete stereotype personnel are well pleased with the Twin-Plate Router. We have eliminated the bottle-neck which long existed in our routing of color plates, the operation which used to cause us much overtime in the stereotype department...We will say we made a good buy."

O. M. Harper, Mechanical Superintendent

STA-HI CORPORATION

...SHINGTON BOULEVARD WHITTIER, CALIFORNIA

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TIME FOR SEASONAL

CHANGE TO RAPID WINTER

COMPOSITION ROLLERS

Thoroughly seasoned Job Press rollers carried in stock for all standard makes of Job Presses —on an exchange basis.

RAPID ROLLER COMPANY

MAIN OFFICE AND FACTORY: FEDERAL AT 26TH STREET • CHICAGO 16, ILLINOIS
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Automate Your Bindery! Operate Equipment In-Line... Save Handling...Increase Production and Profits

Arranging your bindery equipment for smooth flowing in-line operation really breeds efficiency. It simplifies scheduling...reduces stock handling ...conserves floor space...avoids delays...pays off in *extra* production.

Here's where Dexter's complete range of versatile machines can help. Many are designed to be combined *now or later* for profitable bindery automation in your plant.

Saddle Binding? Your work flows from McCain Signature Feeders to Christensen Stitcher to McCain Trimmer...you insert, stitch and trim in one continuous *automatic* operation. Finished books are delivered ready for packing...or to a McCain Mailing Machine.

Side Binding? See how easy it is to automate a variety of operations by coupling a Dexter Arm Gatherer (4 to 48 stations) with a stitcher, coverer, trimmer or other equipment. And Dexter has a full line of equipment to help you automate hard binding, too.

THE DEXTER COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois

MGD

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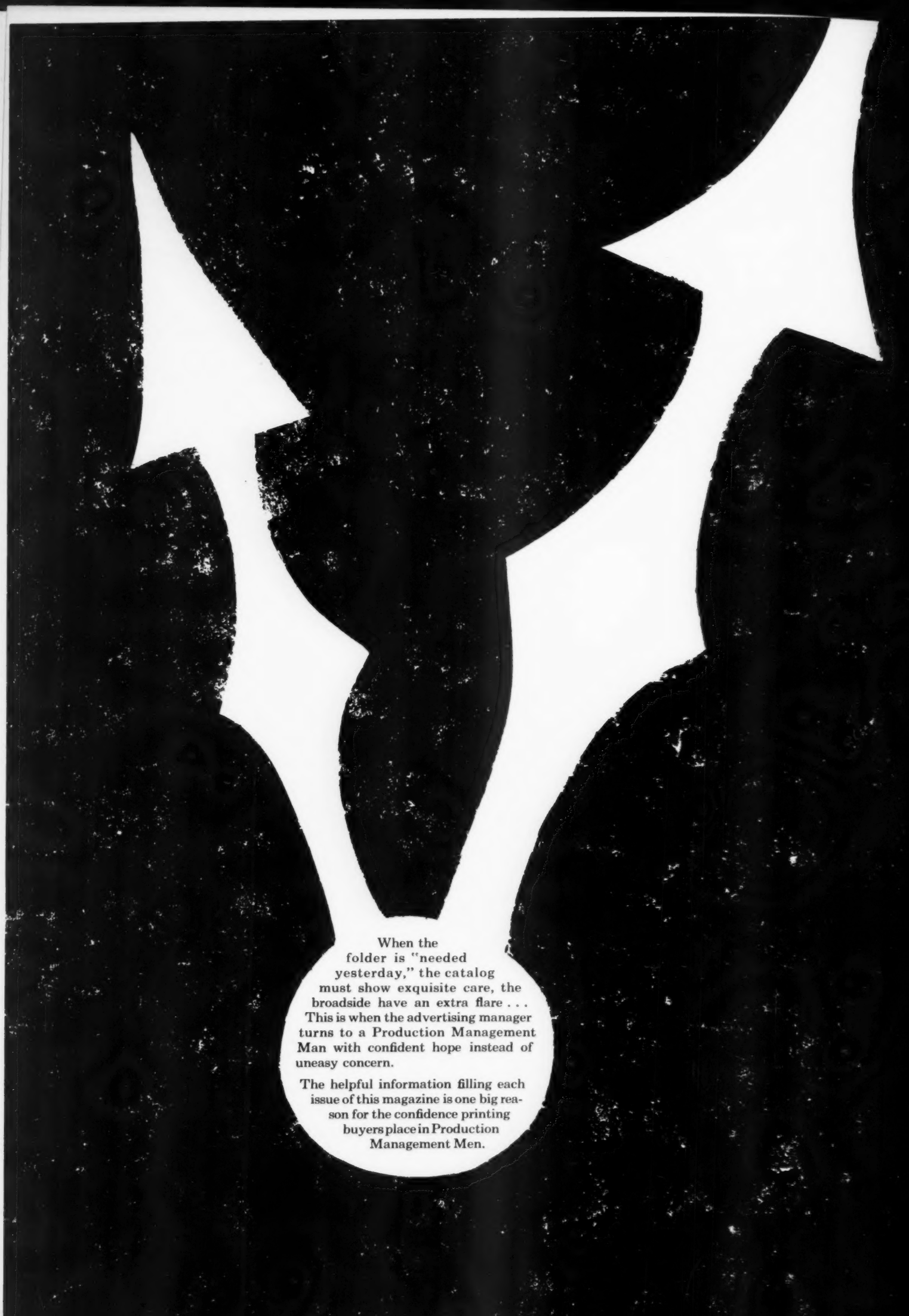
When the folder is "needed yesterday," the catalog must show exquisite care, the broadside have an extra flare . . . This is when the advertising manager turns to a Production Management Man with confident hope instead of uneasy concern.
The helpful information filling each issue of this magazine is one big reason for the confidence printing buyers place in Production Management Men.

SEPTEMBER 1960
VOL. 90, NO. 12

PRINTING PRODUCTION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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Member Publications BPA Business Audit

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THE COVER of this month's issue is an artist's sketch of a typical web offset pressroom in a weekly newspaper plant. The scene provides a direct connection with Richard Pinkerton's article starting on page 40 in which the production future of the weekly newspaper has been thoroughly examined. The story is based upon a survey of publishers in the weekly field who now show indications that they may abandon what was previously a traditional letterpress operation in favor of lithography. Some have already made the move as will be shown in next month's installment. Look for other changes, also, in this important Graphic Arts area.

LETTERS

TO THE EDITORS

Assorted Comment

I wish to thank you for printing an idea of mine in the Idea File. It really makes one feel good to read about his own idea in PRINTING PRODUCTION. I am sending you another and hope it will solve someone's problem as it did mine.

H. J. Ratcliffe, Stereo Foreman
Fall River *Herald News*
Fall River, Mass.

I enjoy reading your magazine each month; and in it, I have found many things helpful to me as production manager of my company.

Edward M. Harwood
Executive Secretary
National Assn. of Litho Clubs, Inc.
Chicago 5, Ill.

Please accept my personal though heretofore unexpressed thanks for the many years of enjoyable reading in PRINTING PRODUCTION. You cannot realize the selling power contained within your well written editorial pages.

Preston F. Tweed
Denver, Col.

At General Electric's Johnson City (N. Y.) location, we find PRINTING PRODUCTION to be both informative and enjoyable. For example, the article on *How Much Light is Needed for Graphic Arts Plants?* in the July issue has been extremely useful.

W. C. Lamparter, Supervisor
Publications Production
Engineering Data
General Electric Co.
Johnson City, N. Y.

Many thanks for the fine write-up you gave our newly-developed portable slug rack in the June issue.

Your Reader Service Card is wonderful! We have received 25 inquiries through this service, including one from Stockholm, Sweden, and one from Lihue, Kauai, Hawaii.

Where could we get more pulling power that covers an area from Sweden to Hawaii? PRINTING PRODUCTION, naturally.

Warren Stremming
Anstrem Sales
Des Moines, Ia.

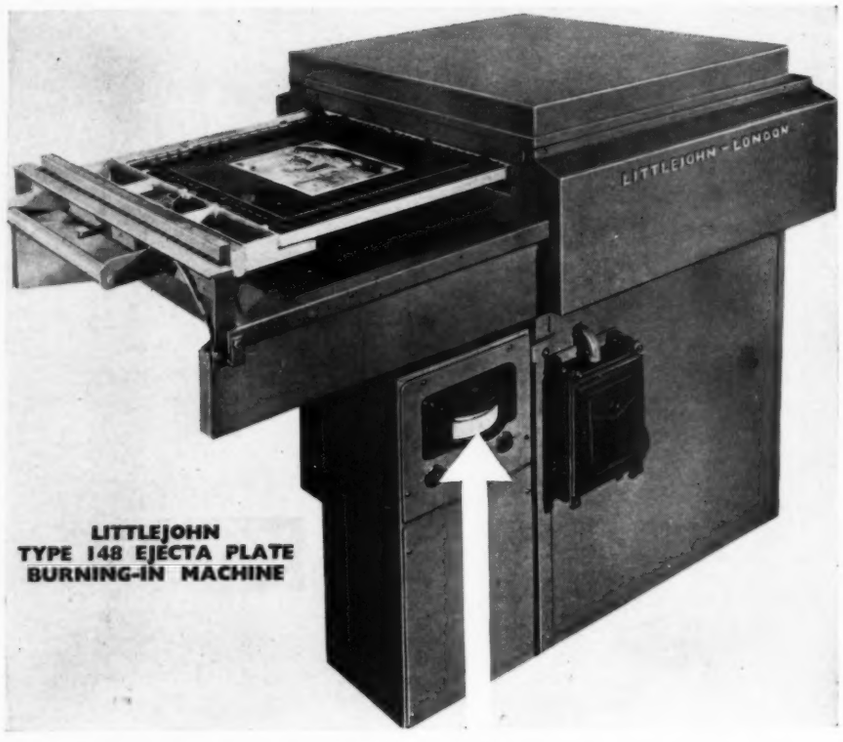
We at Mead Packaging were proud to be a part of PRINTING PRODUCTION's Craftsmen's convention which featured the *Printing in Atlanta* section. We sincerely appreciate the fine coverage we received in your magazine.

Hal H. Fowler, Public Relations Mgr.
Mead Packaging
Div. of The Mead Corporation
Atlanta, Ga.

PRINTING PRODUCTION is one magazine I look forward to receiving each month. Many ideas from it have been applied to our composing room and have worked well. The industry needs your magazine in order to keep abreast with the ever changing problems in the industry—both in management and equipment.

James Robinson
Foreman, Composing Room
Kansas City (Kan.) *Kansan*

This revolutionary machine
ELIMINATES "OVERBURN" in photoengraving



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TYPE 148 EJECTA PLATE
BURNING-IN MACHINE

precision-controlled heating

- *For all types of resists*
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Power Guillotine — Router and Bevelling Equipment

Technical data upon request either from authorized dealers or

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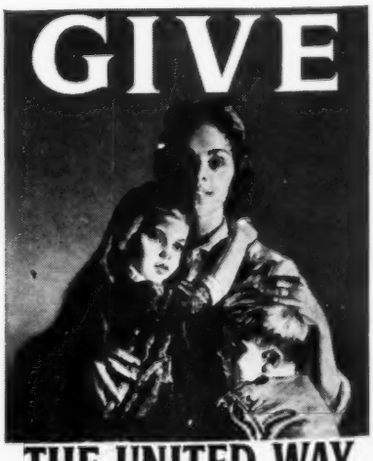
GIVE



THE UNITED WAY

The LUDLOW Way to Profits

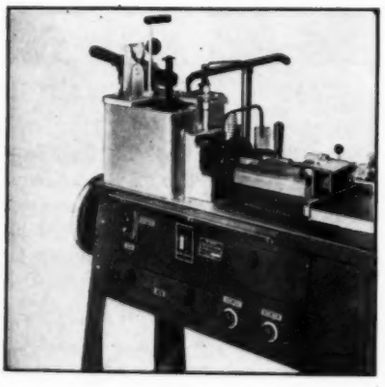
These Ludlow products afford profitable operation with direct production results, avoiding unnecessary steps that slow down the work. All three have earned their standing in the printing industry—Ludlow for fine typography, Elrod for quality strip material, and the Brightype camera for quality conversions.

Ludlow All-Slug Composition

Direct slugline composition with easily-handled Ludlow matrices, from copy to hot metal to form, eliminating the manufacture or purchase of single type. Solid slug forms expedite make-up and lockup, and save press-room time. These short cuts mean larger profits for you.

Brightype Conversions

This method uses existing typesetting facilities to convert letterpress material into photographic images for offset lithography, letterpress and other printing processes. Eliminates many operating procedures; assures clean, sharp reproduction. Brightype users find it a time-saver in handling most requirements.



Elrod Quality Strip Material

This single-purpose machine effectively produces an abundance of quality strip material for many uses. Simple in design and mechanism, the Elrod requires minimum operator attention, and the material withstands hard use. Ideal for spacing material, rule and base. Gas or electric-heated; six different models to fit your particular needs.

Ludlow, Brightype and Elrod folders will show you how to increase your profits—write for your free copies

Ludlow Typograph Company · 2032 Clybourn Avenue, Chicago 14

Set in members of the Ludlow Record Gothic Family

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NEWS ITEMS

Chicago *Tribune* Appointments—L. M. Gossett has been appointed production manager of the Chicago *Tribune*. In his new position, Gossett succeeds H. F. Grumhaus, who has been named vice president and business manager of the newspaper. Named to succeed Gossett as assistant production manager is Stanton R. Cook, who joined the *Tribune* in 1951 as a production engineer.

Elected President of Lanston—Carl C. Sorensen has been elected president, Lanston Industries, Inc. Sorensen joined Lanston in 1936 and has served the company most recently as senior vice president and vice president-sales of Lanston Monotype Co.

Elected Vice President of Lanston—Robert M. Campbell has been elected executive vice president of Lanston Industries, Inc. Campbell joined Lanston in 1959 as a vice president.

Kodak Establishes Technical Posts—Eight men have been appointed to the newly created positions of regional technical sales managers of Eastman Kodak Co. According to a company official, the men will have the responsibility of directing the sales and servicing of Graphic Arts reproduction products.

SORENSEN

CAMPBELL

Those appointed are: M. L. Bokman, Pacific Southern Sales Div., Whittier, Calif.; Frederick R. Chandler, Southwestern Sales Div., Dallas; Joseph A. Jiloty, Midwestern Sales Div., Chicago; James E. McGhee, Jr., Middle Atlantic Sales Div., Rochester, N. Y.; Louis J. Parker, Northeastern Sales Div., New York City.

Also, Robert A. Perko, Kodak Hawaii, Ltd., Honolulu, Hawaii; Robert D. Schulz, Southeastern Sales Div., Chamblee, Ga., and Gordon A. Stevens, Pacific Northern Sales Div., San Francisco.

Nolan Appoints Eastern Representative—Louis F. Fallon has been named to represent the Nolan Corporation in New England, New York and New Jersey. Formerly, he was with Wiretyer Corporation.

FALLON

HURLBUT

To Handle Goss Renewal Requests—James W. Hurlbut has been transferred to Parts Service Dept., Goss Company, Div. of Miehle-Goss-Dexter, Inc. In his new post, Hurlbut will be responsible for handling renewal parts requests.

Mid-States Regional Representatives — Three regional representatives have been appointed by Mid-States Gummed Paper Div., Minnesota Mining and Mfg. Co. Named to handle sales in the Southeastern section of the United States is John E. Mines. His headquarters will be in the office of 3M in Atlanta; and he will cover Georgia, Florida, Alabama, Mississippi, Louisiana and central Tennessee.

Dudley H. Price has been assigned to

ROBERTSON Photo-Mechanical Equipment for DYCRIL* Photopolymer Printing Plate Production

A complete line . . . proven in nation-wide installations

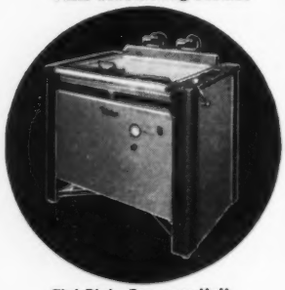
Robertson equipment for the production of photopolymer printing plates meets the highest standards of quality, operating efficiency, and economy. Every unit in the Robertson line is engineered and built with the characteristic care and attention to detail that has become a Robertson trademark.

The reason photopolymer printing plate producers are installing more Robertson equipment than any other, is that they recognize its many exclusive features can be measured in terms that count: *more profitable operation.*

If you are considering the advantages of photopolymer printing plates, investigate the Robertson line of equipment. It offers you more quality and production capability plus greater ease of operation.

*DuPont's name for its photopolymer printing plate

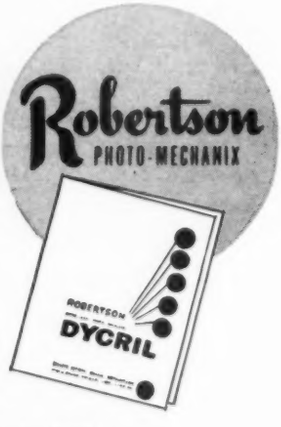
Plate Conditioning Cabinet



Flat Plate Exposure Unit

Rotary Plate Exposure Unit

Plate Wash-Out Cabinet



write for new catalog
describing the complete line of platemaking equipment.
ROBERTSON PHOTO-MECHANIX, INC.
7440 Lawrence Ave. Chicago 31, Illinois

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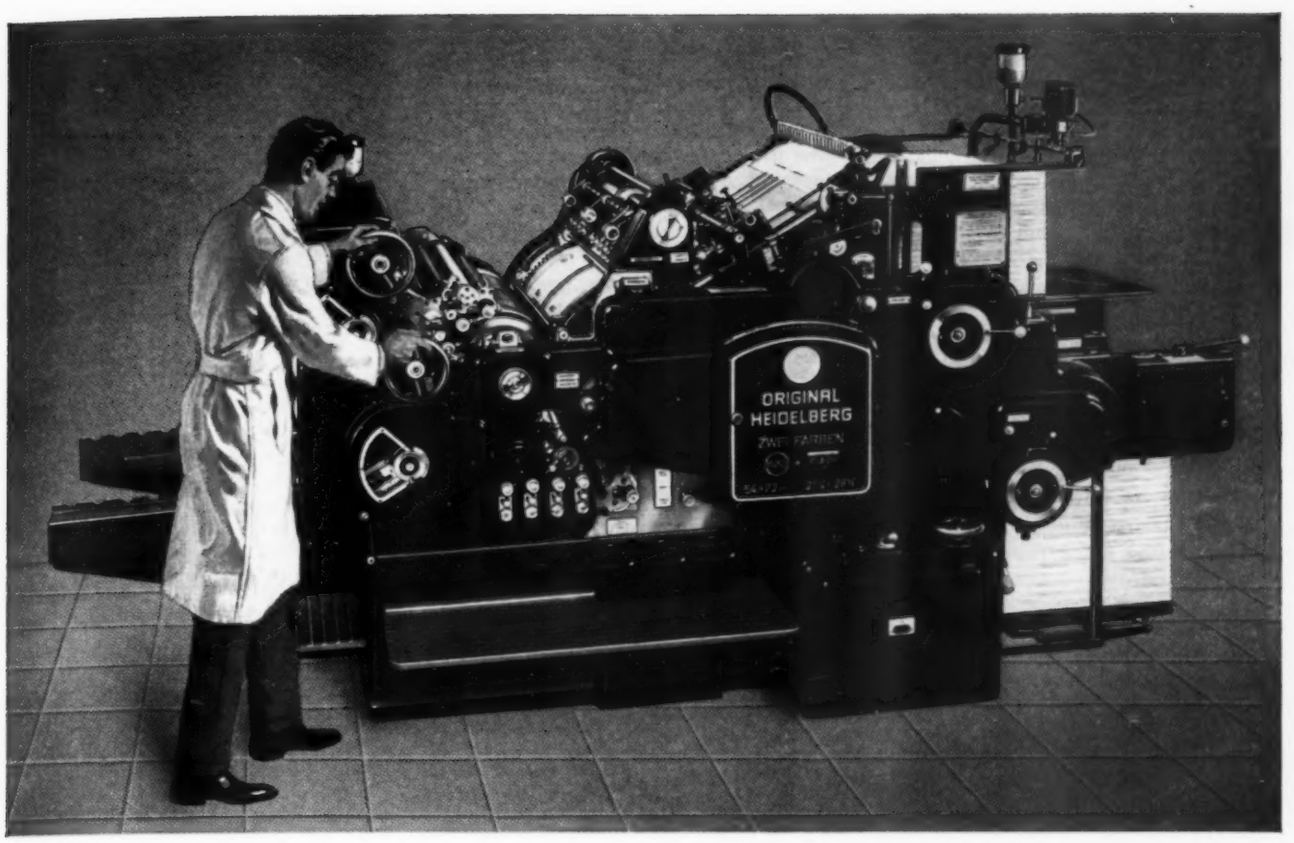


The best of rotary...the best of flatbed ...the best of Heidelberg!

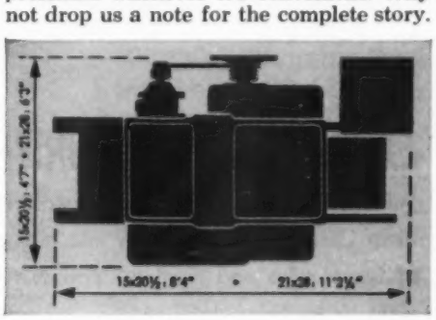
Its unique combination makes two color letterpress available for slightly more in cost than a single color press! And no extra floor space needed!

Inking Diagram 21" x 28"

Have you seen this new Heidelberg? It incorporates a unique combination of rotary and flatbed, that now puts two-color printing advantages (in both 21 x 28 and 15 x 20½ sheet sizes) within reach of small and medium-sized plants for the first time.

Because they are Heidelbergs you get all the best Heidelberg features—including built-in wash-up for rollers of both color units, pyramid inking systems, positive gripper sheet control from feeder to delivery, hairline register, unyielding impressional strength, minimum makeready and high production speeds.

For higher letterpress profits look into this combination . . . low initial investment, rotary-flat-bed feature with subsequent space savings, superior engineering, design and performance. We'll be glad to arrange a working demonstration for you and your pressman whenever it's convenient. Why not drop us a note for the complete story.



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"Letterpress profits really begin when you 'put it on a Heidelberg'"

MAIN OFFICES: HEIDELBERG EASTERN, INC., 73-45 Woodhaven Blvd., Glendale 27, Long Island, N. Y.
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HEIDELBERG SOUTHERN SALES CO., 6319 Eppes Street, PO Box 12301, Houston 17, Texas
Please visit us at the P.I.A. Show, Booths 40, 41, 44 and 45.

For More Information Circle 86 on Reader Service Card

a territory which includes Virginia, N. Carolina, S. Carolina and Eastern Tennessee. His headquarters will be at the 3M office in High Point, N. C. Assigned to the company's Philadelphia office is Edward R. Gallagher. He will handle sales in association with John Attaway in Eastern Pennsylvania, New Jersey, Delaware and Maryland.

Joins Consulting Firm—Joseph W. Lenhart has joined Collier Elliott & Associates, Garden City, N. Y., management consultant firm for the printing industry, as a methods analyst. For the past six years, Lenhart has been an assistant to the director of the Mechanical and Service Div., American Newspaper Publishers' Association Research Institute.

Goss Makes Field Appointments—Frank Baker has been appointed superintendent of the field department, Goss Company, Div. of Miehle-Goss-Dexter, Inc. In his new post, Baker assumes responsibility for servicing and installing printing presses and stereo and electrical equipment. He has been associated with the firm for 24 years. Recently appointed assistant field coordinator for the Goss Company was Gene Plewa. Plewa's responsibilities include installation of new equipment and repairing or modification of existing Goss and Duplex tubular printing presses and stereo machinery.

To Head Champlain's Specialty Sales—Alvin W. Keeshan has joined Champlain Company, Inc., as head of the newly

BAKER

KEESHAN

created Specialty Sales Dept. Services of the department include analyzation of production requirements, assistance in selecting equipment, and supervision of installation and initial operation. Keeshan has formerly served in engineering capacities with American Type Founders Co. and Modern Engraving Machine Co. He is a member of the Gravure Technical Assn. and the Technical Assn. of the Graphic Arts.

New Jersey Firm Purchased—It has been announced that the Star Printing & Publishing Corp., Washington, N. J., has been purchased by Robert D. Buchanan, Jr., and John F. Emmet. Involved in the transaction were the Stryker Press and two area weeklies, *The Star* and *The Phillipsburger*. Emmet will serve as president and Buchanan as chairman and publisher of the new corporation, which is to be known as Star Enterprises, Inc.

Eastern Manager of GPI—Richard W. Dando has been appointed vice president and general manager, General Printing Ink Div.-East, Sun Chemical Corp. Associated with Sun since 1935, Dando will continue to serve the company as vice president and general manager of the Geo. H. Morrill Div.

DANDO

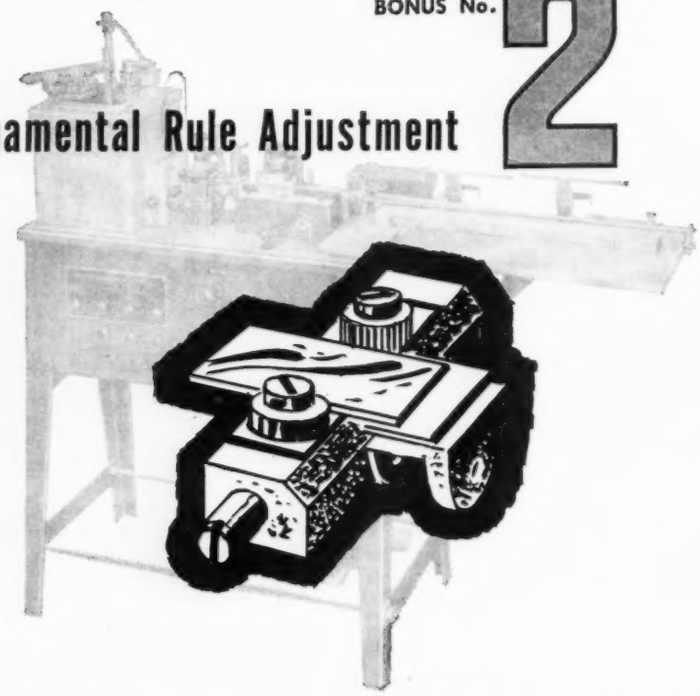
BERGIN

To Represent Bingham in New York—Harrison D. Bergin has been appointed a sales representative in the New York area by Sam'l Bingham's Son Mfg. Co. Bergin has had 14 years of experience in the roller industry in the Pennsylvania-New York area.

Mergenthaler Names Representatives — Frank Auldridge, John Gross and Raymond Thompson have been appointed press representatives by Mergenthaler Linotype Co. Auldridge has been assigned to the

BONUS No. 2

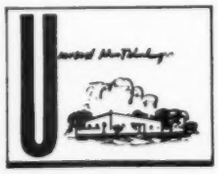
Ornamental Rule Adjustment



Exclusive with the UNIVERSAL STRIP CASTER

With the simple turn of a screwdriver your Universal Strip Caster produces leader line plus an endless variety of fancy rules and borders. You can change from one style to another while casting.

Compare production, performance and price and you'll choose the Universal Strip Caster.



Send for free folder and sample 2 pt. hairline

UNIVERSAL MONO-TABULAR CORPORATION
Manufacturers of the Honig Multiple Broach
715 N. CENTRAL EXPRESSWAY * RICHARDSON, TEXAS

For More Information Circle 180 on Reader Service Card

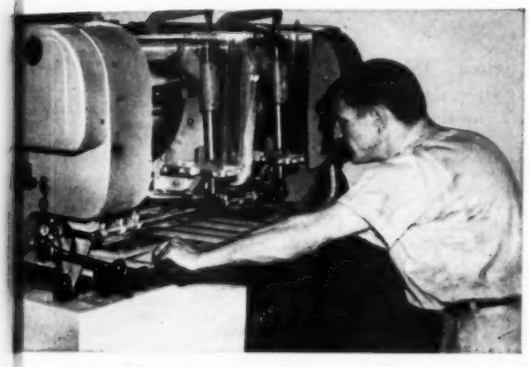
For More Information Circle 117 on Reader Service Card→

SMALLEST TWO COLOR OFFSET LOADED WITH BIG PRESS FEATURES

Full 20 x 26" Sheet Handled by New Miehle 25 Two Color

Latest press to join Miehle's modern line of offset equipment is the Miehle 25 Two Color . . . "the small offset with big press features." Except for the difference in size, the new press is identical to the famed 29 and 38 Two Color Offsets, and incorporates all of their proven advantages.

Sheet size of the 25 Two Color is from 11 x 16" to a full 20 x 26", with running speeds up to 7500 sheets per hour.

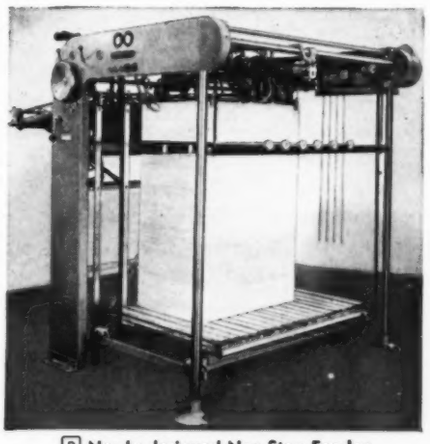


A Inserting sheet catcher in Continuous Delivery

Non-Stop Feeding and Continuous Delivery

This high production feature is standard on the new Miehle 25 Two Color . . . eliminates costly down-time when reloading or unloading.

At the feeder, the rods are inserted to hold the last sheets being fed (see picture B) . . . electric push button pile hoist is lowered . . . new skid moved in and run up . . . rods removed . . . and the new load is ready for feeding without a stop.



B Newly designed Non-Stop Feeder with rods inserted

At the delivery the operator simply slides in the auxiliary sheet catcher (see picture A) . . . removes the load . . . pushes a button to run a skid board up into position . . . removes the sheet catcher . . . and the press keeps right on going.

Extra Work Space, Accessibility and Control

In this size range, only the Miehle 25 offers so much working space and accessibility (see picture C). With all controls and adjustments within easy reach the pressman has close control of all factors throughout the run.

With the Miehle 25 common impression design, (see picture C) each sheet is held by the same grippers assuring positive control throughout the printing cycle.

Swing Gripper In-Feed Gives Perfect Register At Any Speed

With this modern system of sheet feeding you makeready at slow speed and run the press up to production speed with the assurance that perfect register holds all the way. The same is true with running different colors at different speeds *. . . the Miehle 25 holds hairline register at any speed.*

Large Form Rollers For Smooth, Even Ink Coverage

No other press of similar size can match the inking unit of the new 25, with four form rollers of different diameters. Whatever the job, close control and precision distribution are achieved for best results.

All rollers in both the inking and dampening systems are adjustable in minute degrees for exact ink-water balance . . . and all can be adjusted from outside the press, *without stopping production.*

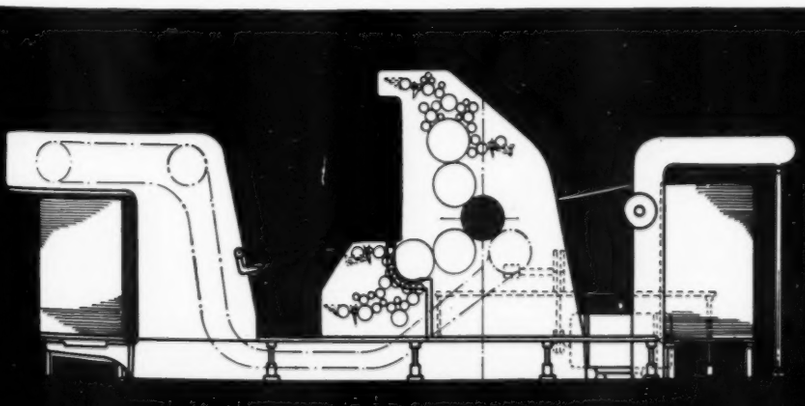
D Second Color unit opened for access to plate and rollers

Complete Running Register Control on Second Plate Cylinder

Adjustable both across and around, the Second Color Unit Plate Cylinder can be set for hairline color register, from outside the press *while running.* Saves valuable set-up and production time.

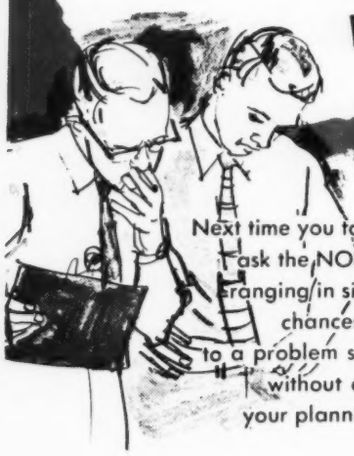
In addition, the two color unit glides out of the way (see picture D) to give full access to the plate cylinder and the inking and dampening rollers for fast wash-up and changeover.

Get the full story on the Miehle 25 Two Color Offset . . . it offers so many "big press" advantages. See your Miehle representative today.



THE MIEHLE COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois

a perfect team—
YOU and the
NOLAN man

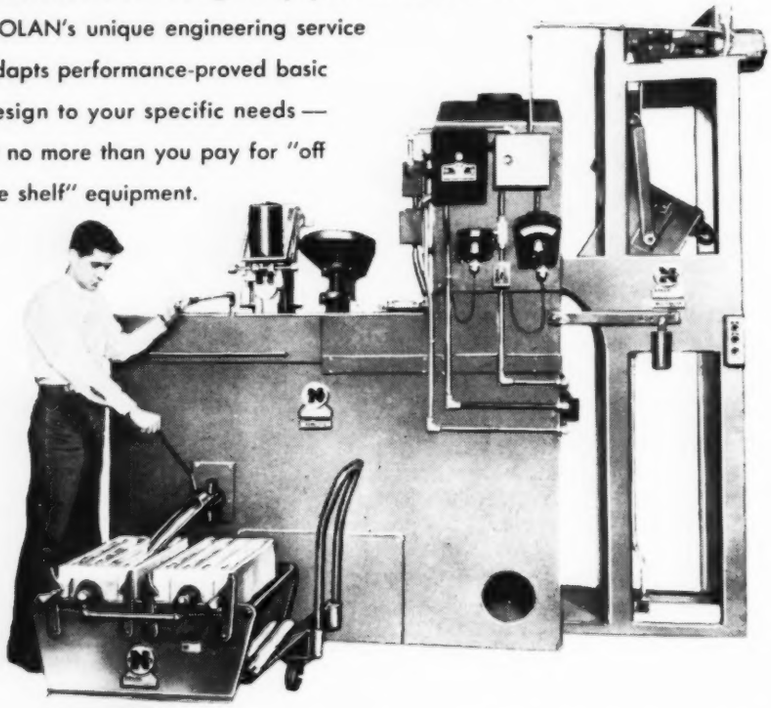


Next time you take a close look at your remelting operation, ask the NOLAN man to call. He's worked on remelt systems ranging in size from less than one ton to 70 tons — and chances are he's already come up with the right answer to a problem similar to yours. His suggestions, yours without cost or obligation, could prove invaluable in your planning. A letter or phone call will bring him to you.

NOLAN REMELTER and MELTEVATOR—ANOTHER PERFECT TEAM!

The standard of leading newspapers the world over!

NOLAN's unique engineering service adapts performance-proved basic design to your specific needs — at no more than you pay for "off the shelf" equipment.



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for full information on NOLAN's "design for savings" ...a modern remelt installation for your paper's needs.

NOLAN Corporation
ROME, N. Y.
design for savings

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area composed of Virginia, W. Virginia, Delaware, Maryland and the District of Columbia; and Gross, to N. Carolina, S. Carolina, Tennessee, Mississippi, Alabama, Georgia and Florida. Thompson will represent Mergenthaler in Maine, New Hampshire, Vermont, Massachusetts, Connecticut and Rhode Island.

Named Vice President of Robertson—W. Bayne Gibson has been named to the newly created post of vice president, sales, of Robertson Photo-Mechanix, Inc. He was formerly field sales manager for Du Pont's Dycril photopolymer printing plates. D. Thomas Kennedy continues as sales manager of photomechanical products.

GIBSON

WINTERROTH

Rejoins Illinois Paper—Shirley Winterroth has joined the Bloomington (Ill.) *Daily Pantagraph* as assistant production manager, under Russell B. Miller, production manager. Winterroth was formerly associated with the *Pantagraph* as an apprentice printer in 1941. He holds a B.S. degree in Industrial Education from the University of Illinois and also completed a course in industrial management.

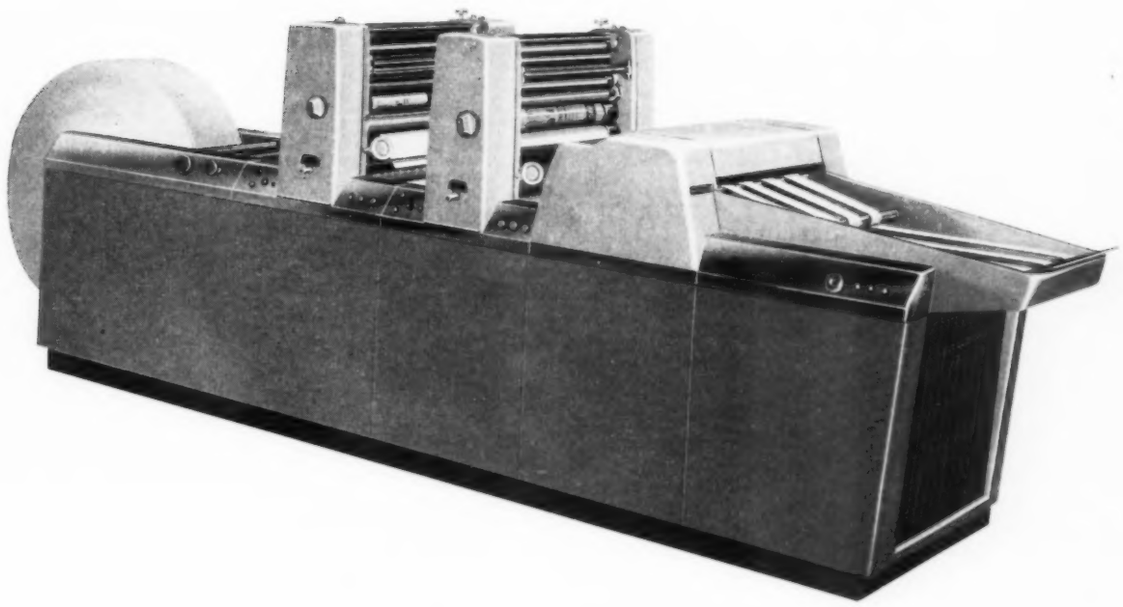
Intertype Export Executive Retires—The retirement of Frank Hoffmann, vice president-export sales, Harris-Intertype Corp., has been announced. In his 44-year career with Intertype, Hoffmann served as manager of export sales for 20 years, assistant secretary and assistant treasurer prior to his appointment to the vice presidency.

To Manage G-E Assemblies Plant—W. W. Smith has been named manager of the California plant of the Distribution Assemblies Dept., General Electric Co.

Williamson Opens Dallas Branch—A new office and warehouse have been opened in Dallas by Williamson & Company. John J. Lattmann has been named manager in charge of the branch.

Du Pont Names Assistant Graphic Arts Manager—Victor M. Salter has been appointed assistant manager of Graphic Arts products, Photo Products Dept., E. I. du Pont de Nemours & Co. He succeeds Dr. William H. Vinton who has been transferred to the International Depart-

TANDEMER
ROLL-FED OFFSET PRESS



PRINTS THE BULK OF YOUR JOBS!

Didde-Glaser's new roll-fed offset press prints a wide variety of work, and will outperform a small sheet-fed press 4 to 1.

It has the speed to handle long runs . . . the low-cost makeready to handle short runs . . . and the economy to make both profitable!

In fact, the Tandemer brings "big-press" performance into your shop – at half the price!

PRINTS THE BULK OF YOUR JOBS – AT HIGH SPEED!

- LETTERHEADS
- INVOICES
- STATEMENTS
- PRICE LISTS
- CATALOG SHEETS
- PURCHASE ORDERS
- SALES LETTERS
- ORDER BLANKS
- DIRECT MAIL
- INSERTS, ETC.

The Tandemer is modular in design . . . consisting of compact, self-aligning units that can be added or removed, according to job requirements. All units can be purchased separately.

For the business that makes up the major part of your volume, these units make up a "starter" set: one rollstand, one offset printing unit, one terminal cut-off unit, and one creeper delivery unit. Printing units, accessories, attachments are interchangeable.

INVESTIGATE THE TANDEMER TODAY! If you're looking for a low-cost, roll-fed offset press . . . with low on-press and operating costs – *Look into the Tandemer!* An inquiry on your company letterhead will bring a prompt reply.

Write: Didde-Glaser, Inc., Dept PP9, 50 Hiway and West 12th Avenue, Emporia, Kansas.

Didde-Glaser, Inc.
Emporia, Kansas

Designers / Manufacturers / Distributors of Graphic Arts Equipment

For More Information Circle 53 on Reader Service Card

ment. Succeeding Salter as assistant manager for engineering reproduction products is David P. Hurley, former photo products field sales manager in the New York area.

Enco New England Representative—Robert H. Mullen has joined the technical sales staff of Azoplate Corporation. He will handle Enco products in the New England area.

Schmidt Heads Honolulu Lithograph—Carl R. Schmidt, president, Schmidt Lithograph Co., San Francisco, has been elected president of Honolulu Lithograph Co., Honolulu, Haw. In his new position, Schmidt succeeds Paul L. McIlree, who has resigned to take another position. Previously, Schmidt was executive vice president of the firm.

To Distribute British Paper Knives—Super Speed Printing Machinery, Inc., has been named United States distributor of the steel paper cutting knife manufactured by Rudge, Ltd., England.

Named General Sales Manager of Fraser—Logan W. Miller has been named general sales manager of Fraser Paper, Ltd. He has been associated with Fraser since 1934 and will make his headquarters in the firm's New York office.

Photo-Chromotype Engraving Co.
Relies on
IMPERIAL VITAPLATE
for all Commercial Work

Mr. Carl G. Ermel, vice president and Mr. Milton Deputy check quality of a Vitaplate engraving.

"Imperial Vitaplate minimizes make-over zinc etchings. It helps us meet competition from other commercial plants and printing processes," says Mr. Carl G. Ermel, Vice President of Photo-Chromotype, Philadelphia.

Economies are not the only reason Photo-Chromotype depends on Vitaplate. Quality features of "pin-point" highlight halftone dots and clean, deep etched line engravings free of shoulders are equally important. Have you tried Vitaplate lately? Check on Imperial's Photoengraving Engineering Service for technical plant layout and process improvements.

IMPERIAL TYPE METAL COMPANY
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IMPERIAL ZINCS

- **VITAPLATE with VITASOLV** — *the original one-bite additive*
- **DURAPLATE**
- **REGULAR**

Imperial

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MILLER

JOHNSON

Joins Modernization Staff—Edward Johnson has joined the staff of Apex Printing Machinery Co., Inc. In his new post, Johnson will specialize in developing a program of modernization for various areas of the printing industry. Previously, he was associated with Printing Machinery Co. and Falco Corporation.

Luis A. Ireland Dies—Luis A. Ireland, a well-known printing industry leader in California, died of a heart attack, July 24. Mr. Ireland had a varied background in printing; at one time he served as executive secretary of both the Employing Printers Assn. and the Employing Lithographers Assn. of San Francisco.

West Virginia Plant to Modernize—Plans for modernization and expansion of the commercial department of the Wheeling News Lithograph Co., Wheeling, W. Va., have been announced. The company was formerly known as the News Publishing Co. Newly appointed general manager of the plant is Richard E. Drew, who has had extensive experience in commercial printing. Kenneth Burchard, acting dean of the school of printing management, Carnegie Institute of Technology, Pittsburgh, will supervise the expansion.

DREW

MARK

Durst Expands in Graphic Arts—The expansion of Durst (U. S. A.), Inc., into the Graphic Arts field has been announced. The company recently introduced its G-139 vertical process camera and color separator. Directing the sales, promotion and product development of this new Graphic Arts line is Mel Mark. Mark has 20 years of background in photoengraving, photo offset and photomechanical work. He formerly served as administrator of the Manhattan School of Printing.

"I'm an electrotyper . . . white shirt and all.

And darned glad to be one . . . now. But I can remember Dad coming home from the foundry looking like a half-washed coal miner and tracking-up every rug in the house. How he hated that dusting machine with its vibrating brushes, belching that black, graphite smog all over the place. He always claimed that he swallowed more than he ever got on the mold."

"But when Tenak came out with their plastics and introduced silver spray, we jumped on the bandwagon just like everybody else—and brother, what a difference! Wax molding went out the window because plastics molded faster and more accurately. And it was cheaper and better than lead—no more pattern plates and we got rid of that big, old press and put in more baths. Yes sir! . . . Tenak makes our place look like a laboratory—and operate like one, too."

"But the one who likes Tenak the most is my wife . . . she does the laundry."

Tenak

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Plastics for Letterpress TENAPLATE • TENAMOLD • TENAPLAST • LAMINATED TENAMOLD • TENALEVEL • TENANON • TENAMAT • TENAPAK • TENALEO

For More Information Circle 158 on Reader Service Card

Smith Named General Manager of ANPA—Stanford Smith has been named general manager of the American Newspaper Publishers Assn. He succeeds Cranston Williams, who has retired after 21 years in that position. Previously, Smith had been assistant general manager of the ANPA.

To Head Folding Carton Division—Calvin F. Lloyd has been promoted to the presidency of Gardner Division, Diamond National Corp. Lloyd joined the division 30 years ago when it was known as Gardner Board & Carton Co. When the company merged with Diamond Match Co. in 1957, Lloyd was named divisional controller and later assistant to the president.

Promoted by Business Forms Firm—William G. Stine has been named assistant to the president of Pioneer Business Forms, Inc. He has been associated with the firm for two years.

To Manage Berea, O., Company—R. H. Thompson has been named business manager of the Berea Publishing Co., Berea, O. The firm publishes the Berea (O.) *News*, the *Southwest News* and has a commercial printing division.

LOAD
Lift the glass, position the negative and plate.
FLIP
Close the glass frame. Pull the release knob and flip the vacuum frame over.
EXPOSE
Set the timer. Automatically controlled carbon arc lamp is built into the base with the reflector.

Obsoletes all other Platemakers!

nuArc flip-top PLATE MAKER

Fast—simple—clean—compact. nuArc flip-top platemakers are the modern way to make perfect offset and letterpress plates.

A specially designed carbon arc reflector floods every square inch of printing surface with even light...eliminating undercutting and decreasing exposure time. Live rubber blanket guarantees perfect negative-to-plate contact.

You save with flip-top units in the initial cost (cost 30% less than separate frame and arc lamp units), in the installation (no partitions, curtains or external exhaust systems necessary), and in the operation (easier, faster operation than with conventional units).

*Send for the latest "flip-top" Bulletin A-500PP

13 • 18 MODEL FT-18
17 • 24 MODEL FT-24
21 • 26 MODEL FT-26
28 • 32 MODEL FT-32
30 • 40 MODEL FT-40
43 • 52 MODEL FT-52
50 • 62 MODEL FT-62

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COMPOUNDED ESPECIALLY FOR VACUUM PUMPS
Gives better lubricating—less wear—provides maximum pump protection. Can has easy pour spout. $1.00 pint—AT YOUR nuArc DEALERS NOW!

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MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assn.—1960 Conv., Hotel Statler, Buffalo, N. Y., Oct. 9-12. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA-RI Mechanical Conf.—1961 Conf., Palmer House, Chicago, June 5-7. Mgr. Richard L. Lewis, ANPA-RI Mechanical and Service Div., 750 Third Ave., New York 17.

Book Manufacturers' Institute — 1960 Conf., Boca Raton Hotel, Boca Raton, Fla., Oct. 19-22. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36.

Fifth District Craftsmen's Conf.—Secy.-Treas. Avery Schlaghek, 4350 Lyman Rd., Toledo, O.

Flexographic Technical Assn.—1961 Meeting, Hotel Roosevelt, New York, Feb. 9-10. Exec. Secy. Julian Ross, 220 W. 42nd St., New York 36.

Graphic Arts Assn. Executives—1960 Fall Meeting, Shoreham Hotel, Washington, D. C., Oct. 21-22, Secy-Treas. Doris Hall, 321 Tower Bldg., Washington 5, D. C.

Gravure Technical Assn.—1961 Conv., Hotel Drake, Chicago, Mar. 8-10. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20.

Great Lakes Mechanical Conf.—1961 Conf., Hotel Gibson, Cincinnati, Jan. 22-24. Secy. John E. Innis, R. R. No. 1, Box 546, Indianapolis 27, Ind.

Illinois Newspaper Mechanical Conf.—1960 Conf., St. Nicholas Hotel, Springfield, Ill., Oct. 29-30. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assn. of Electrotypers & Stereotypers, Inc.—1960 Conv., Continental-Hilton Hotel, Mexico City, Mexico, Oct. 23-26. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14.

Intl. Assn. of Printing House Craftsmen—1961 Conv., Palmer House, Chicago, Aug. 6-9. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19.

Intl. Graphic Arts Education Assn.—1961 Conf., Ferris Institute, Big Rapids, Mich., Aug. 13-18. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1961 Meeting, Palmer House, Chicago, Aug., 6-9. Secy. Harry Deck, 75 E. Wacker Dr., Chicago 1.

Intl. Typographic Composition Assn.—1960 Conv., Hotel Statler Hilton, Dallas, Oct. 19-22. Exec. Secy. McKinley M. Luther, Washington Bldg., 15th St. and New York Ave., N.W., Washington 5, D. C.

(Continued on Page 22)

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HAMMERMILL OPAQUE

Tobacco, tennis rackets, tea sets . . . whatever you print will look sharp and clear on Hammermill Opaque. The distinctive, radiant whiteness of Hammermill Opaque shows off your product illustrations in sharpest detail. Three finishes—Pearl, English and Vellum.

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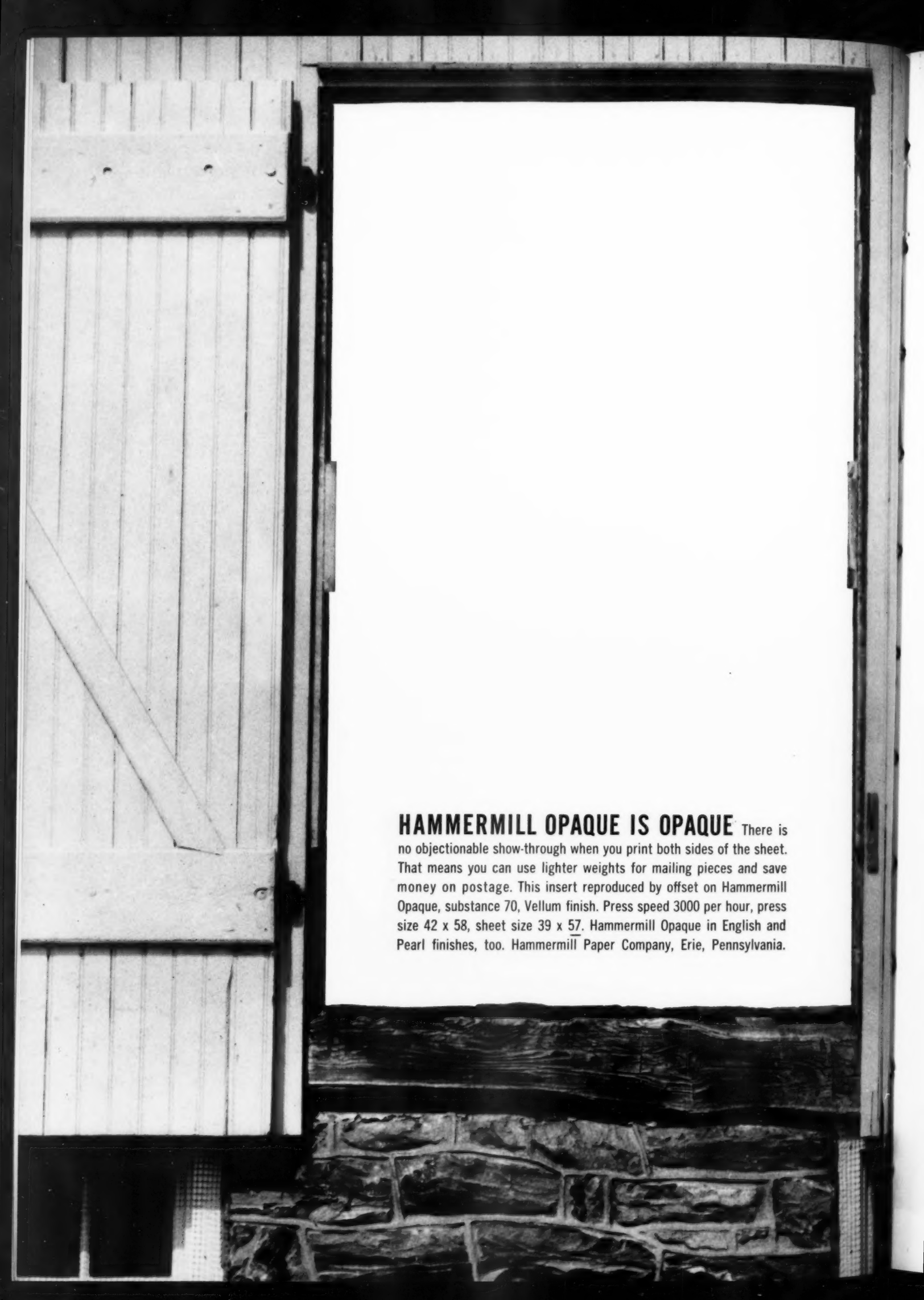

HAMMERMILL OPAQUE IS OPAQUE There is no objectionable show-through when you print both sides of the sheet. That means you can use lighter weights for mailing pieces and save money on postage. This insert reproduced by offset on Hammermill Opaque, substance 70, Vellum finish. Press speed 3000 per hour, press size 42 x 58, sheet size 39 x 57. Hammermill Opaque in English and Pearl finishes, too. Hammermill Paper Company, Erie, Pennsylvania.

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At Its Very Best With, HANTSCHO Web-Fed Offset Presses

Whatever you print on a Hantscho press will *look* RIGHT and *be* RIGHT.

The largest publishing firms and commercial printers from coast-to-coast rely on Hantscho web-fed offset presses to handle their most important work because these fine presses have proven themselves, *on the job,* to be:

- RIGHT IN DESIGN
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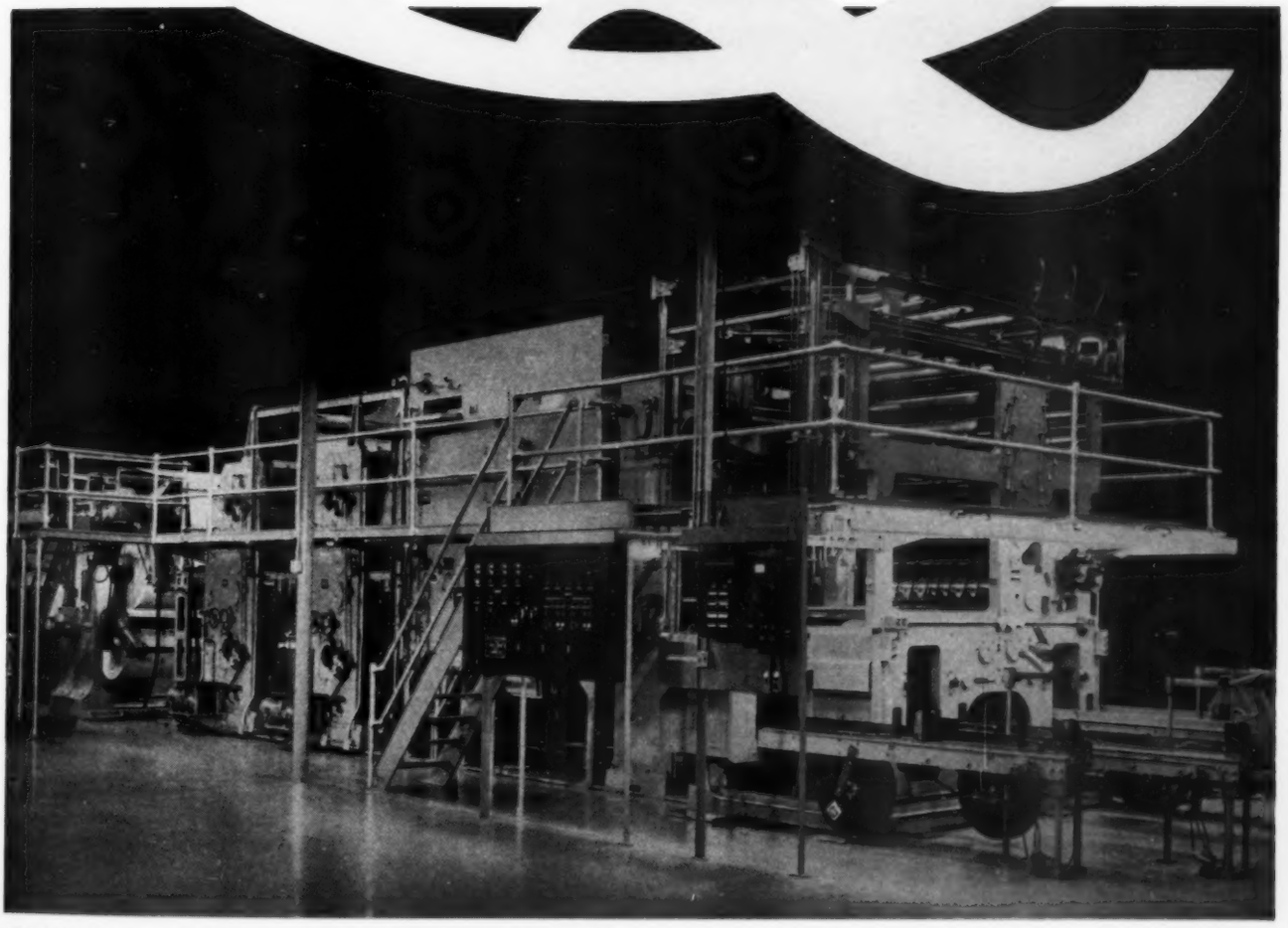
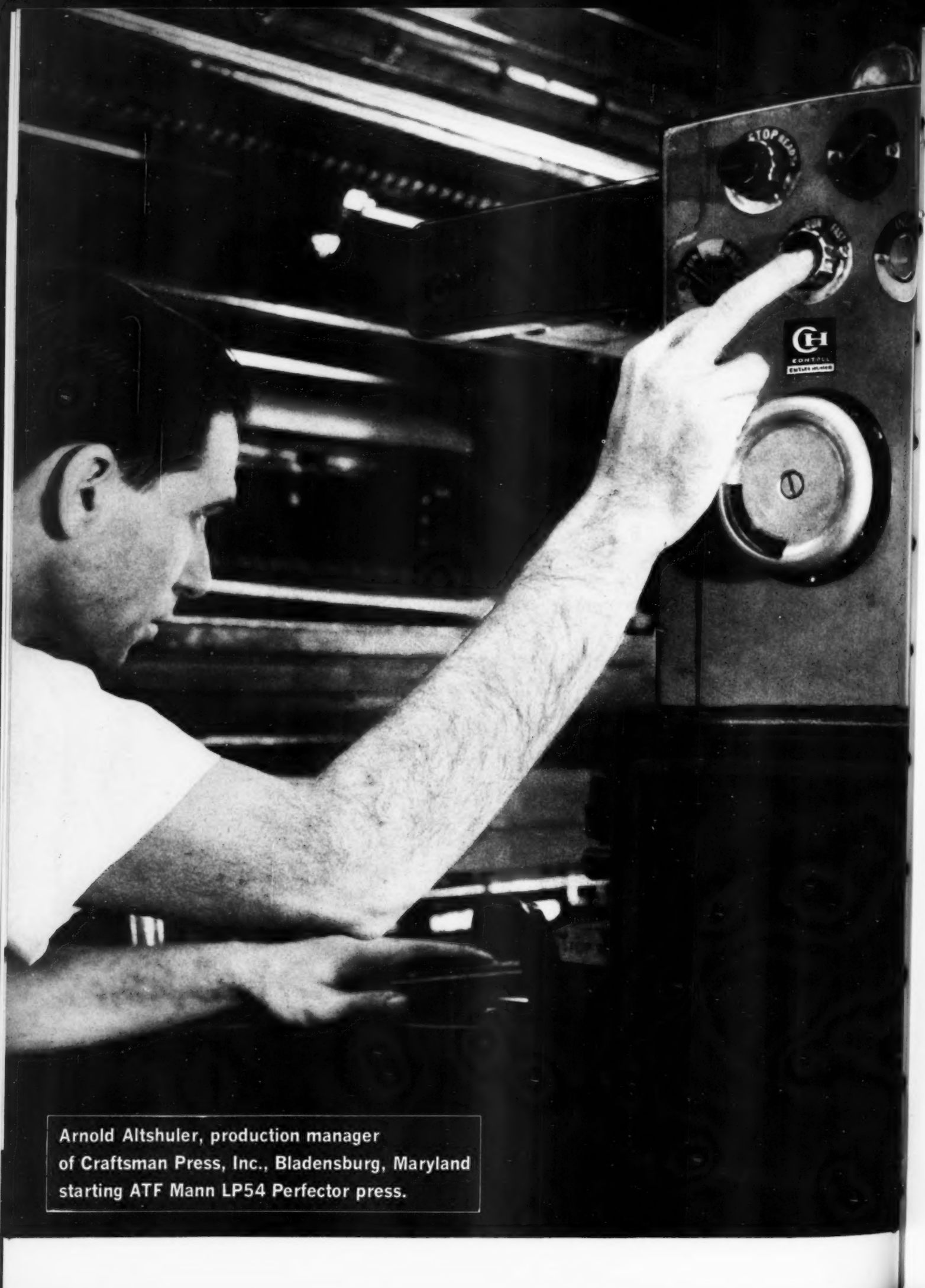


Hantscho high-speed, 2-color web-fed offset press with folder. Photo shows delivery end of 44½ x 54" model. Custom-built for Conkey Division of Rand McNally & Co., in operation at their Hammond, Indiana plant.

For More Information Circle 81 on Reader Service Card



Arnold Altshuler, production manager
of Craftsman Press, Inc., Bladensburg, Maryland
starting ATF Mann LP54 Perfector press.

Craftsman Press specifies Cutler-Hammer Controls

... the brand specified in the Graphic Arts industry more often than all others combined

Mr. Albert I. Altshuler, president of Craftsman Press, Inc., Bladensburg, Maryland is emphatic about his choice of control for his equipment:

"Whenever we order new equipment, we always specify that Cutler-Hammer motor controls be employed exclusively on the units. Cutler-Hammer products offer us service, dependability and quality workmanship."

Specializing in map reproduction and general lithography, Craftsman Press' demands for accuracy and reliability are exacting. The ATF Mann LP54 Perfector press has been on 24-hour duty since July, 1959.

If you're looking for maximum performance in your controls, the AC Wound Rotor Controller provides highly accurate speed control. No overtraveling. No undertraveling. An exclusive feature of Cutler-Hammer control, the controller features 32 speed points, which is exclusive with Cutler-Hammer.

Cutler-Hammer is the leading supplier of control to the Graphic Arts industry. We can supply you with the exact control for your needs. So, be sure to specify Cutler-Hammer control on the equipment you purchase. For more details contact the Cutler-Hammer sales representative nearest you.

WHAT'S NEW? ASK...

CUTLER-HAMMER

Cutler-Hammer Inc., Milwaukee, Wisconsin • Division: Airborne Instruments Laboratory • Subsidiary: Cutler-Hammer International, C. A. Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.

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Printing Industry Meetings

(Continued from Page 16)

Iowa Newspaper Mechanical Conf.—Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—Kansas Gen. Mgr., Larry Miller, Kansas Press Assn., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assn., 115 Walter Williams Hall, Columbia, Mo.

Lithographers and Printers National Assn.—1961 Conv., Arizona Biltmore, Phoenix, Ariz., Apr. 30-May 5. Dir. Oscar Whitehouse, 1025 Connecticut Ave. N.W., Washington 6, D. C.

Mid-Atlantic Newspaper Mechanical Conf.—1961 Conf., Penn-Sheraton Hotel, Pittsburgh, Mar. 22-25. Gen. Mgr. G. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assn. of Litho Clubs, Inc.—1961 Conv., Biltmore Hotel, Dayton, O., May 4-6. Exec. Secy. Edward M. Harwood, 430 S. Clark St., Chicago 5.

National Assn. of Photo-Lithographers—1960 Conv., Conrad Hilton Hotel, Chicago, Oct. 5-8. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, New York.

National Paper Trade Assn.—1960 Conf., Conrad Hilton Hotel, Chicago, Sept. 19-21. 1961 Conf., Waldorf Astoria, New York, Mar. 26-29. Exec. Secy. O. Glenn Leach, 220 E. 42nd St., New York 17.

National Printing Equipment Assn., Inc.—1960 Meeting, Sheridan-Park Hotel, Washington, D. C., Oct. 25-26. Exec. Secy. Harry L. Gage, 140 Nassau St., New York 38.

National Safety Council Printing and Publishing Section—1960 Meeting, Conrad Hilton Hotel, Chicago, Oct. 18. Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Daily Newspaper Composing Room Executives Assn.—Exec. Secy. Lewis R. Greene, Westerly (R.I.) *Sun.*

New England Newspaper Mechanical Conf.—1960 Conf., Hotel Statler-Hilton, Boston, Oct. 15-16. Secy.-Treas. Walter C. Crighton, New London (Conn.) *Day.*

Newspaper ROP Color Conf.—Secy. Arthur Brashears, American Assn. of Newspaper Representatives, 141 E. 44th St., New York.

Northwest Mechanical Conf.—Hotel St. Paul, St. Paul, Mar. 4-6 Secy.-Treas. Ralph N. Carson, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3.

Pacific Newspaper Mechanical Conf.—1960 Conf., Multnomah Hotel, Portland, Ore., Sept. 23-25. Secy. Donald Newhouse, Portland (Ore.) *Oregonian.*

Packaging Institute Assn.—1960 Meeting, Hotel Statler, New York, Oct. 31-Nov. 2. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17.

Printing Industry of America—1960 Conv., Hotel Sheraton Park, Washington, D. C., Oct. 24-27. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave. N. W., Washington 15, D. C.

Research and Engineering Council—1961 Meeting, Hotel Fort Des Moines, Des Moines, Ia., May 22-24. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave. N.W., Washington 15, D. C.

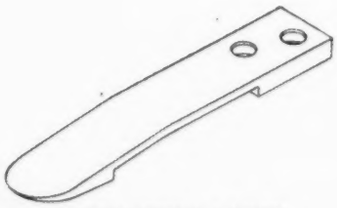
Screen Process Printing Assn., Intl.—1960 Conv., Hotel Sherman, Chicago, Nov. 11-13. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—Secy. Walter C. Johnson, Jr., P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1961 Conf., Hotel Adolphus, Dallas, Mar. 5-7. Secy. Claude V. Capers, P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assn.—1961 Conf., Hotel Dinkler-Andrew Jackson, Nashville, Tenn., May 3-5. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

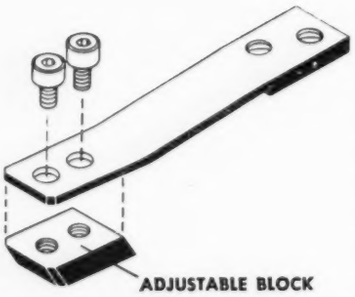
Technical Assn. of the Graphic Arts—1961 Conf., Deshler-Hilton Hotel, Columbus, O., June 12-14. Secy.-Treas. Cyril A. Horton, Research Laboratories, Eastman Kodak Co., Rochester 4, N. Y.



OLD STYLE LATCH

When the back (swinging) distributor screw is not correctly adjusted, matrix damage can result. If the screw does not latch close enough to the distributor box rails and combination bar, the matrix will twist as it rises into the screws. The action will cause unnecessary wear on the matrix, bar and screws.

THE STAR ADJUSTABLE (G-18-A) DISTRIBUTOR BACK SCREW LATCH



IMPROVED STYLE LATCH

. . . allows an adjustment to be made at this critical point. A separate movable block (see illustration) permits the machinist to make a correct, "in-or-out" setting. The two screws (G-113) are loosened and the back screw is set to the correct distance (.004"-.006") from the bar. The movable block can then be adjusted so the back screw latches in the correct position and eliminates matrix, screw and bar damage. Adjusting screws are then reset.

The G-18-A Improved Latch will fit all Linotypes and Intertypes. Write today, for complete details.

STAR PARTS, Inc.
SOUTH HACKENSACK, N. J.

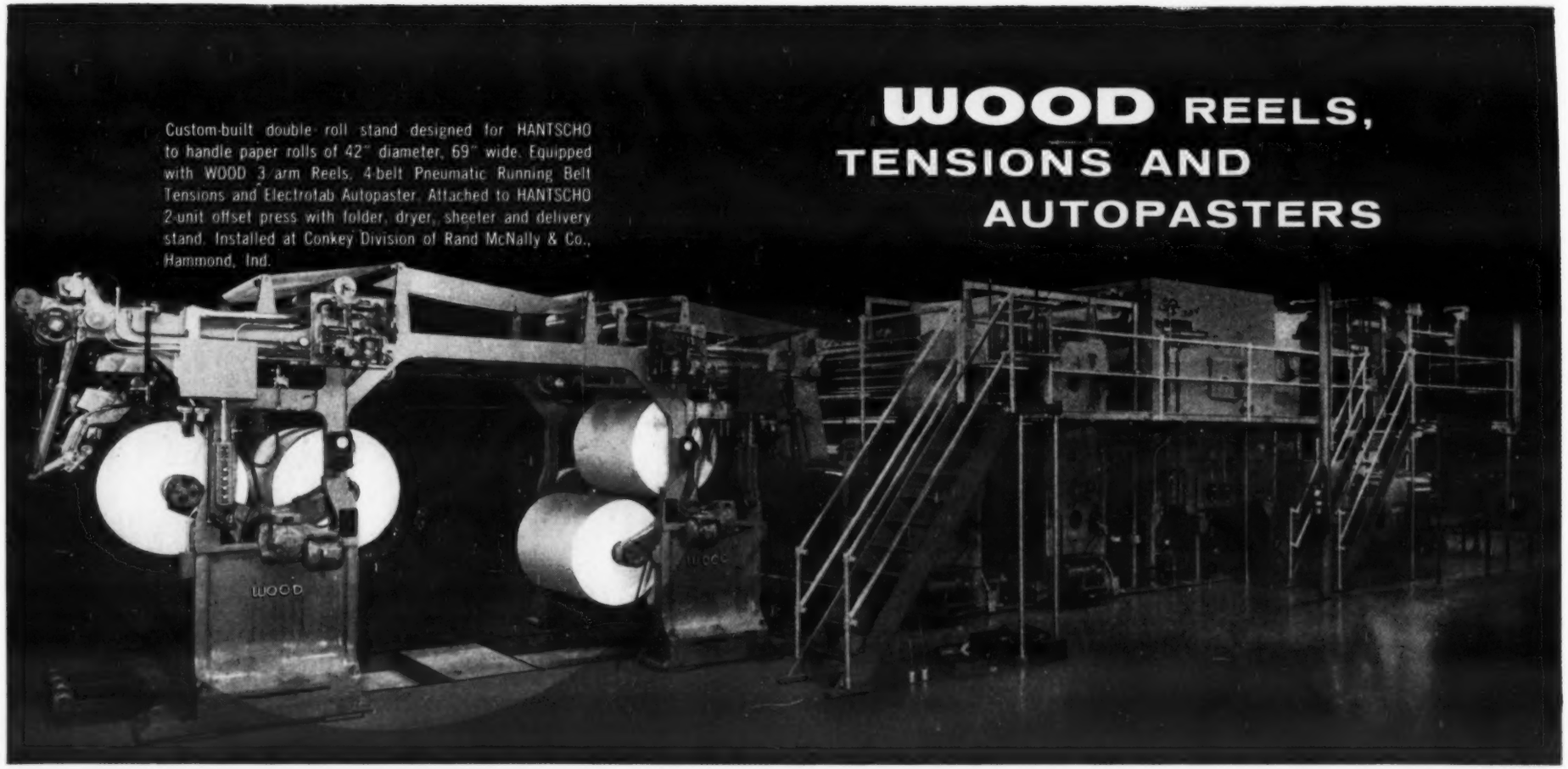
BRANCH: 1327 BROADWAY, KANSAS CITY, MO. AGENCIES: CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER • SO. ACTON, MASS. • STAR PARTS (LINECASTING) CANADA LTD. MONTREAL AND AGENTS OVERSEAS.

Precision TRADE ★ MARK Parts

For More Information Circle 168 on Reader Service Card

For More Information Circle 237 on Reader Service Card

WOOD REELS, TENSIONS AND AUTOPASTERS



Custom-built double-roll stand designed for HANTSCHO to handle paper rolls of 42" diameter, 69" wide. Equipped with WOOD 3-arm Reels, 4-belt Pneumatic Running Belt Tensions and Electrotab Autopaster. Attached to HANTSCHO 2-unit offset press with folder, dryer, sheeter and delivery stand. Installed at Conkey Division of Rand McNally & Co., Hammond, Ind.

Designed to boost Production and Profits

WOOD Reels, Tensions and Autopasters are custom-built to accommodate *any size* of paper rolls. They can be attached to newspaper, gravure or lithographic presses and geared to make pastes at running speed of your press.

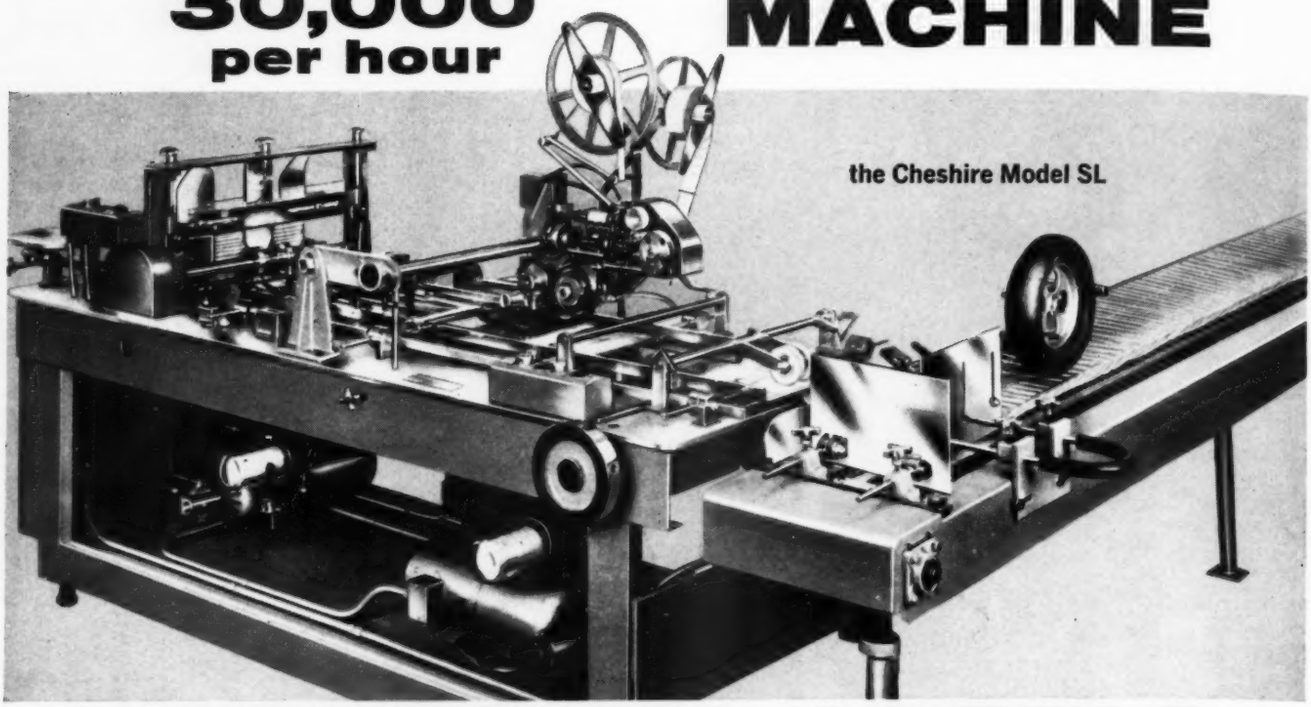
Many of the largest publishers and commercial printers use WOOD outstanding equipment to handle paper rolls in widths up to 150 inches. Whether you print on newsprint or coated stock, a WOOD Reel-room installation will boost production and make your printing process a smoother operation.

A WOOD engineer will be glad to furnish full information on these outstanding Reels, Tensions and Autopasters.

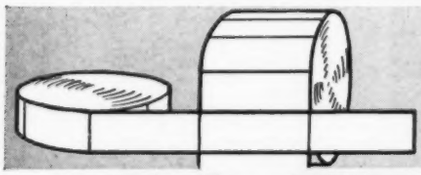
WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY
Executive & Sales Office: 501 Fifth Avenue, New York 17, N.Y.

30,000 per hour MACHINE

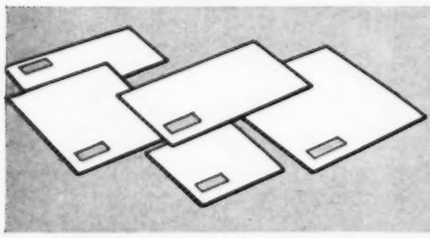


APPLIES ALL LABELS



Feeds, cuts, glues and attaches roll strip labels, continuous pack form labels and tape strip labels . . . preaddressed from punched cards, magnetic tapes, plates and stencils.

TO PRINTED PIECES



Labels magazines, newspapers, tabloids, catalogs, flyers and other printed pieces up to full ¾" thick! Applies labels to standard size 9" x 12" magazines and smaller at speeds up to 30,000 per hour . . . can be adjusted to label larger sizes up to 14" x 17". Easily adjustable for changes in label position and piece thickness.

OTHER BENEFITS, TOO!

- **single high-speed feeder** reduces manning requirements . . . is conveniently located for easier feeding . . . requires less set-up time and maintenance.
- **hardened spiral drive gears sealed-in-oil** for quiet, low-friction operation on heavy duty labeling at prolonged high speeds.
- **counter-balanced feeder** eliminates machine vibration.
- **variable-speed magnetic brake drive.**
- **photoelectric disconnect** — no label is released unless printed piece is in labeling position.
- **completely equipped, ready to operate**—includes variable-speed conveyor, all electrical requirements.
- **central wiring box** speeds electrical maintenance.
- **electric counter.**
- **separate vacuum pumps** for labeling head, feeder
- **needs only minimum floor space.**
- **time purchase plan,** if desired.

CHESHIRE INCORPORATED

★ write for descriptive brochure on the Cheshire Model SL

DEPT. PP-9 • 1644 N. HONORE STREET • CHICAGO 22, ILLINOIS

For More Information Circle 41 on Reader Service Card

Chemco MARATHON

ALL NEW 24" x 24" ROLL FILM CAMERA

with automatic roller applied contact screen

Now, for the first time, engravers and lithographers can make contact screen halftones with roll film speed and economy in a 24" camera.

The new Marathon is based on the proven design of Chemco's famous Model F Series roll film cameras but incorporate these outstanding advancements:

- Holds two screens in any combination of the following:
  Rectangular—up to 24" square
  Circular—up to 23½" diameter
  Contact—automatic, up to 18" x 22"
- Has single knob film control
- Has new guillotine type cut off knife
- Has simplified diaphragm control
- Restyled with all controls designed for maximum operating simplicity
- Color accessories available

Let us prove to you that the Marathon camera, through roll film speed and economy, costs less to own and operate than any other camera of its size.

AUTOMATIC CONTACT SCREEN MECHANISM, an exclusive Chemco development, saves time, eliminates handling and increases screen life.

chemco

CHEMCO PHOTOPRODUCTS COMPANY, INC. Main office and plant—Glen Cove. N. Y.

Atlanta • Boston • Chicago • Cleveland • Dallas • New Orleans • New York

Exclusive West Coast Agents: California Ink Company, Inc. • Exclusive Agents in Canada: W E Booth Company, Ltd.

For More Information Circle 40 on Reader Service Card

This is the Burgess No-Pac Mat ...the one-piece mat they're talking about!*

You've probably already heard about the amazing BURGESS NO-PAC Mat—the one-piece mat that's saving time, cutting costs and improving reproduction for papers across the country . . . from the largest to the smallest dailies.

Yes, the BURGESS NO-PAC Mat is loaded with advantages. It's easier to handle all around . . . gives you better depth, richer solids, sharper type, clearer halftones.

See for yourself—IN YOUR OWN PLANT—what the BURGESS NO-PAC Mat can do! One of our representatives will be glad to show you why it pays to switch to BURGESS NO-PAC Mats. Write, wire or phone to arrange for a demonstration in your own plant under actual operating conditions.

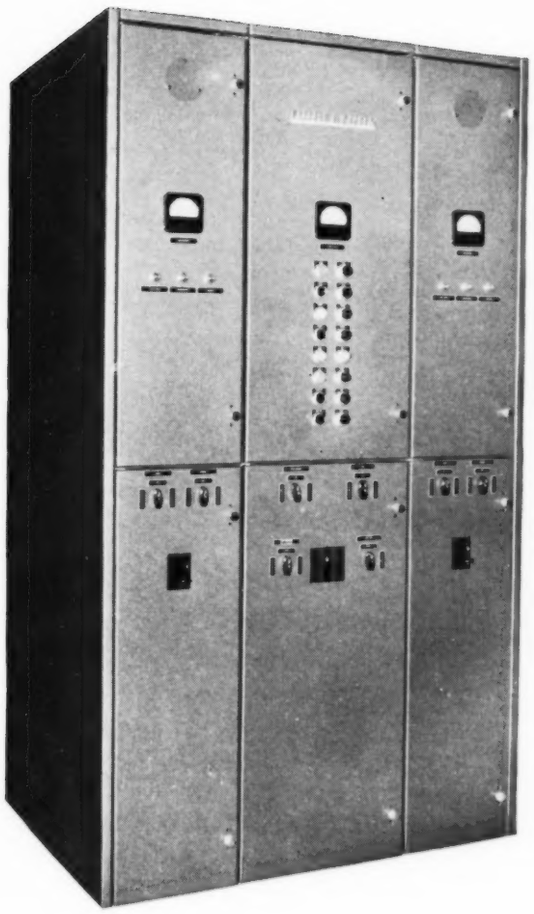
BURGESS
CELLULOSE COMPANY
FREEPORT, ILLINOIS

Canadian Representative: R. M. Lousen & Co. Ltd., Kennedy Road, Agincourt, Ontario

For More Information Circle 26 on Reader Service Card

CHICAGO ROTOPRINT COMPANY
equips
New Rotogravure Presses with
HURLETRON DC PRESS DRIVES

Chicago, Illinois—Chicago Rotoprint Company is equipping all six of its new presses with Hurletron DC Press Drives. The new presses are part of an overall expansion plan. Total power involved for the installations is 975 H.P. and includes 3 monotone presses and 3 others of 12, 10 and 8 units. In order to maintain automatic precise control of register, Chicago Rotoprint also specified Hurletron "Registrol" circumferential register and centerline lateral controls for all these presses. All Hurletron controls are manufactured by Electric Eye Equipment Company, Danville, Illinois.



MORE EFFICIENT PRESS PERFORMANCE THROUGH MODULAR, STATIC CONTROL POWER CONVERSION UNITS

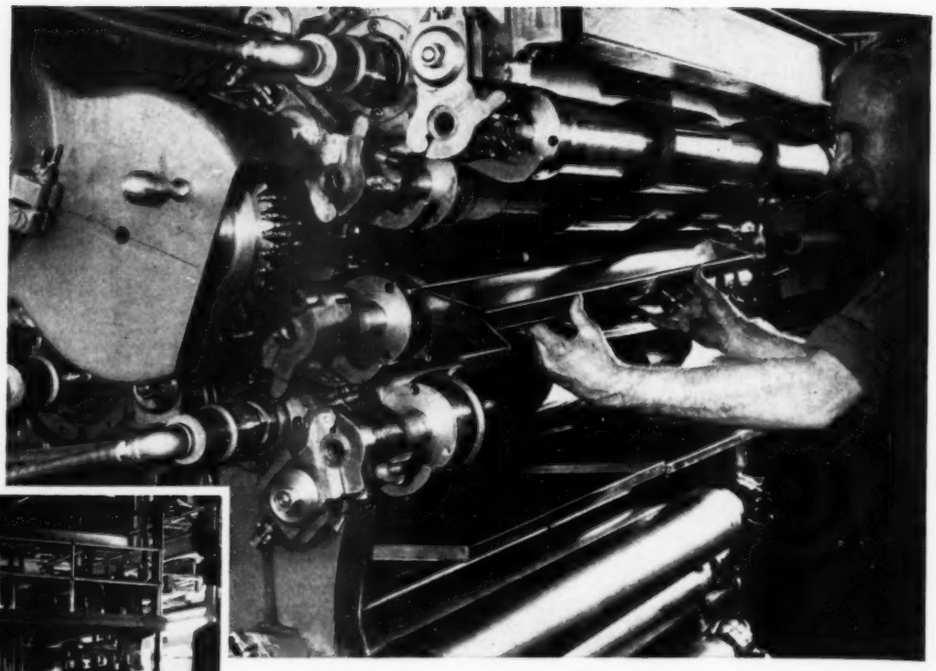
Rotogravure and publication presses move through their entire range of speeds —from threading to full— smoothly and efficiently with HURLETRON DC PRESS DRIVES. Preset running speeds are held constant and stepless accelerations drastically reduce web breaks. Compact, static and contactless components with high reserve power provide reliable, maintenance-free operation. Hurletron Unitized DC Press Drives consist of a well designed supervisory control which handles as many motors as required with individual power conversion units for each motor. Based on advanced principles of power conversion, Hurletron Press Drives are tubeless, completely modular and employ the simplest of circuits for more reliable performance and new economy in operation. Write for complete details today.

Other products for the graphic arts:

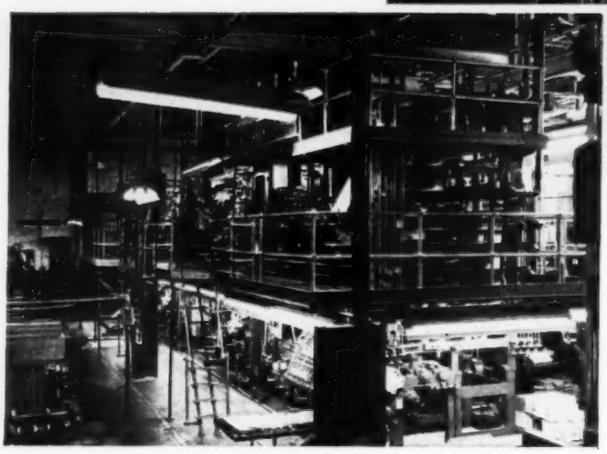
AC Press Drives
Automatic ROP Register Controls
Press Control Consoles

ELECTRIC EYE EQUIPMENT COMPANY
DANVILLE 2, ILLINOIS

For More Information Circle 56 on Reader Service Card



Pressman James McGoff removes drip pan from Baldwin Press Washer after washing up ink rollers on Rumford's new Hoe rotary letterpress. One printer calls Baldwin Washers "penny items worth their weight in gold compared to the capital investment you make in a press of *any* size." Many Baldwin features are patented and patent applications on *new* features are made constantly.



Here's Rumford's new Hoe 64-page color magazine press. This machine is used for relatively short runs, unusual for such big equipment, so that the advantages of Baldwin *automatic* ink-roller washups are even more important. More and more presses—letterpress and offset, web-fed and sheet-fed, large and small—are being equipped with Baldwin Press Washers.

"Baldwin Press Washers mean fast, clean roller washups and help us maintain our high quality* standards"

Clarence Geiger, Vice-President
The Rumford Press, Concord, N.H.

Rotary letterpresses equipped with Baldwin® Press Washers are seen in more plants every day. You'll understand why when you read what Clarence Geiger, Vice-President and General Manager of The Rumford Press has to say:

"*Clean* ink-roller washups are important to quality control; *fast* washups are important to cost control. We get *both!* Baldwin Press Washers mean fast, clean roller washups and help us maintain our high quality standards."

The advantages of Baldwin *automatic* ink-roller washups on rotary letterpress machines become more and more important as the use of color in magazine advertising and editorial matter increases . . . as the demand for R.O.P. color in newspapers grows by leaps and bounds. Baldwin Press Washers do the job *fast*—strip the entire train of ink-rollers clean in a matter of minutes. So, if *you* have a roller-cleaning problem, send us the make, model, and serial number of your presses.

**"*In every field of endeavor . . . quality printing.*" *That's more than a slogan to management and craftsmen at The Rumford Press; it's the philosophy that sets the standards on every job.*

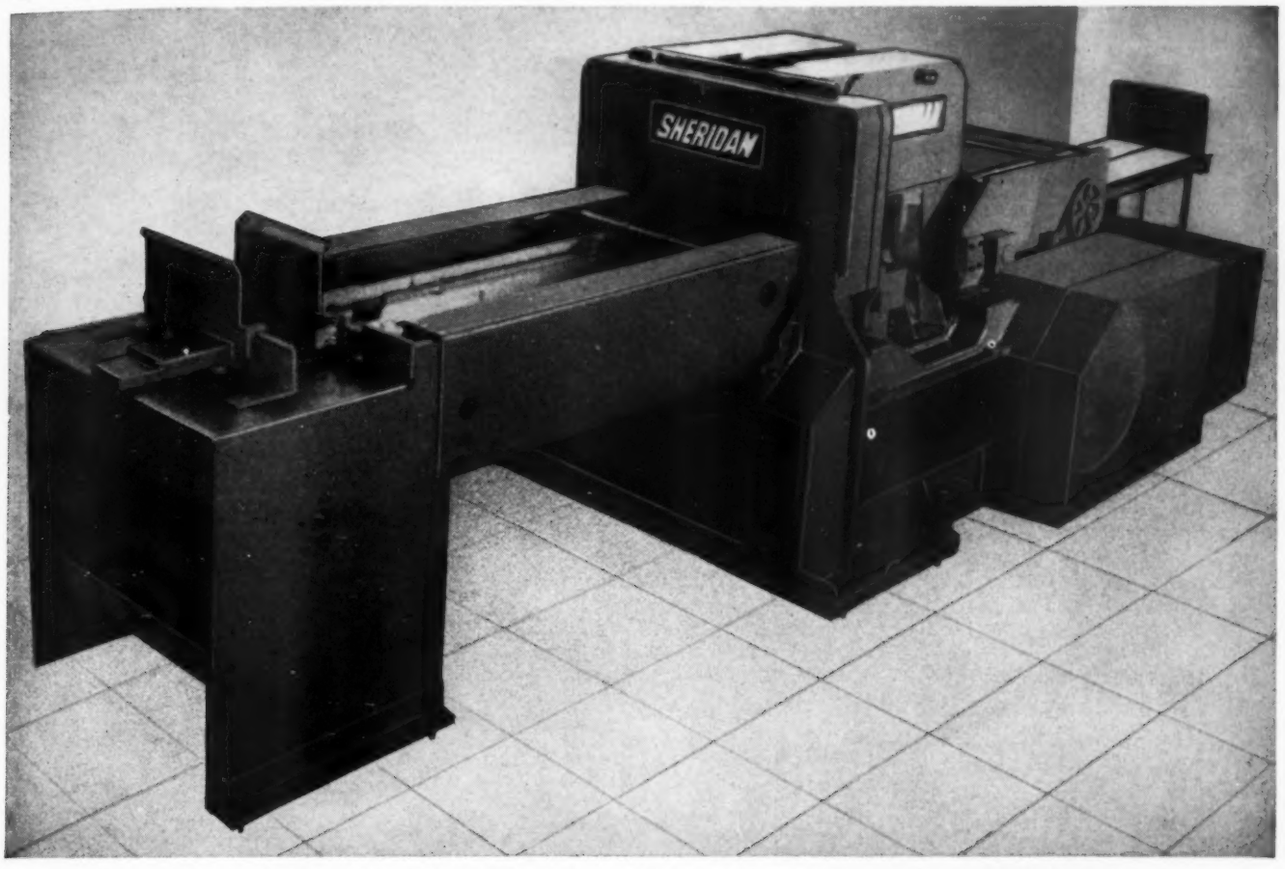
WILLIAM GEGENHEIMER CO., INC.

80 Roebling Street
Brooklyn 11, New York
Phone: EVergreen 8-5610

Manufacturers of Baldwin Ink Fountain Agitators • Baldwin Press Washers • Baldwin Water Stops • Baldwin Water Levels

For More Information Circle 67 on Reader Service Card

PRODUCTION GOES **UP**...



AND COSTS GO **DOWN**

. . . when a new Sheridan Accu-Shear 3-knife trimmer is added to binding and covering line. Now the entire gathering-binding-covering-trimming sequence can be integrated into one continuous operation!

Accu-Shear trimmers are being used successfully in both edition and publication plants, eliminating excess material handling and storage, speeding up delivery schedules . . . cutting costs! Quality has been more than satisfactory.

The standard Accu-Shear has a capacity of 1⅜" thickness in sizes to 17½ x 11½" trimmed, at speeds up to 100 cuts/minute. A 2" capacity model is available.

For even greater production economy, the Accu-Shear can be connected to a Sheridan-Taylor automatic counter-stacker, eliminating manual counting and piling.

SINCE 1835 / **SHERIDAN**

T. W. & C. B. SHERIDAN COMPANY
220 Church St., New York 13, N. Y.

PRODUCT OF 125 YEARS OF EXPERIENCE 1835-1960

For More Information Circle 157 on Reader Service Card

Now You Can Try The Beautiful New

BLUE RIBBON CONTRAST MAT

Instantly Popular With All Users

BLUE RIBBON*

*REG. U.S. PAT. OFFICE

The Contrast is an entirely new mat in the Blue Ribbon Line featuring Color Contrast with Beautiful Reproduction ★ Ample Casts ★ Fine Release ★ Accurate Register

FOR SAMPLES or DEMONSTRATIONS, WRITE:

CERTIFIED DRY MAT CORPORATION
555 Fifth Avenue New York 17, N.Y.

For More Information Circle 36 on Reader Service Card

LE NOUVELLISTE Selected SCOTT Color-Equipped Press Units

SCOTT presses

Modern plant of Le Nouvelliste
Trois-Rivieres, Que.

PIERRE DANSEREAU, PRESIDENT, SAYS: "The *SCOTT press, installed in our plant, is a solid, efficient machine, requiring little or no maintenance . . .*"

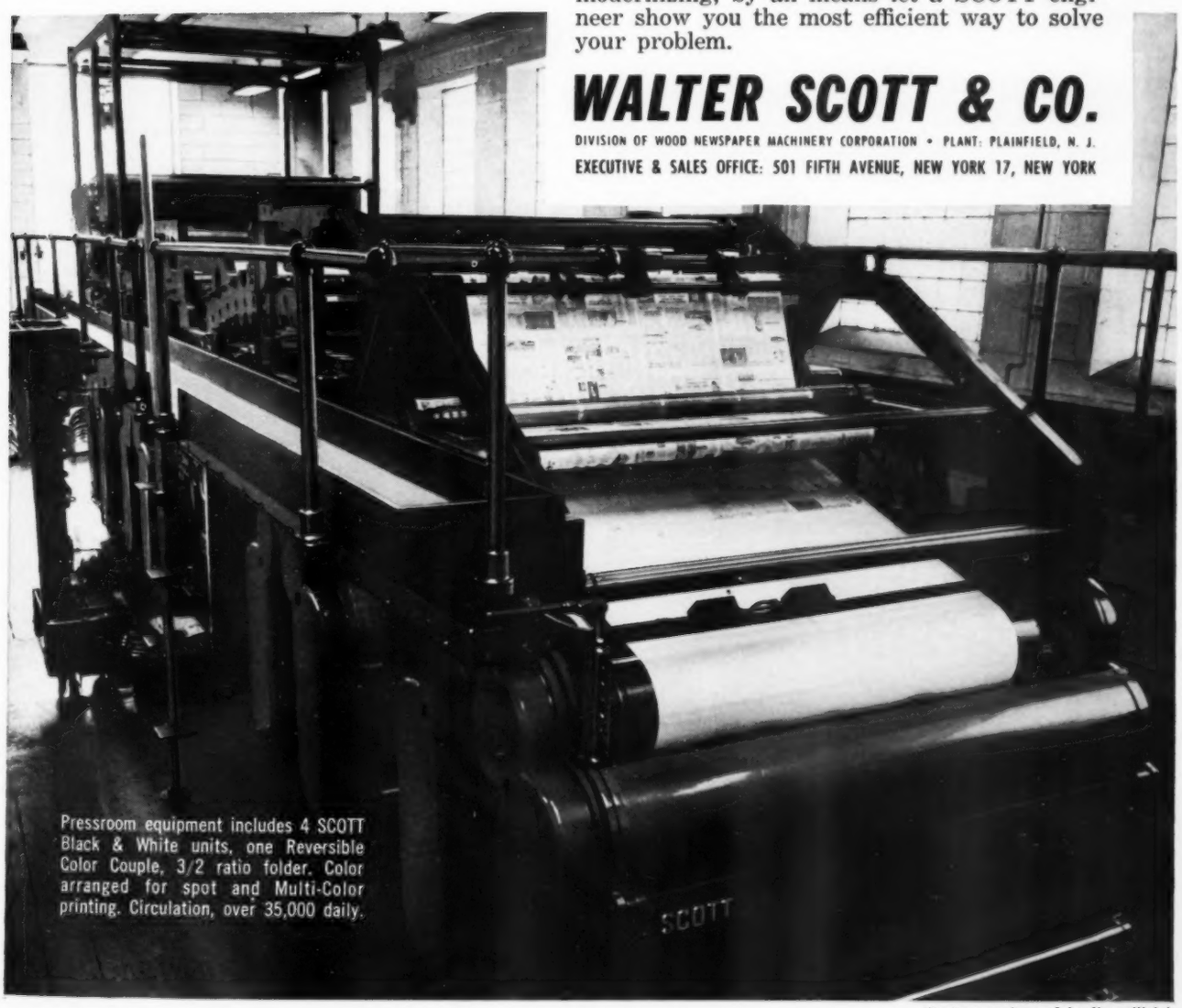
The satisfactory performance of the color-equipped presses in the plant of Le Nouvelliste is repeated in newspaper plants wherever SCOTT high-speed, streamlined units are installed.

SCOTT press units, equipped with color cylinders or Color Couples, meet every requirement for today's high-speed, spot and Multi-Color printing. If your pressroom needs modernizing, by all means let a SCOTT engineer show you the most efficient way to solve your problem.

WALTER SCOTT & CO.

DIVISION OF WOOD NEWSPAPER MACHINERY CORPORATION • PLANT: PLAINFIELD, N. J.

EXECUTIVE & SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, NEW YORK



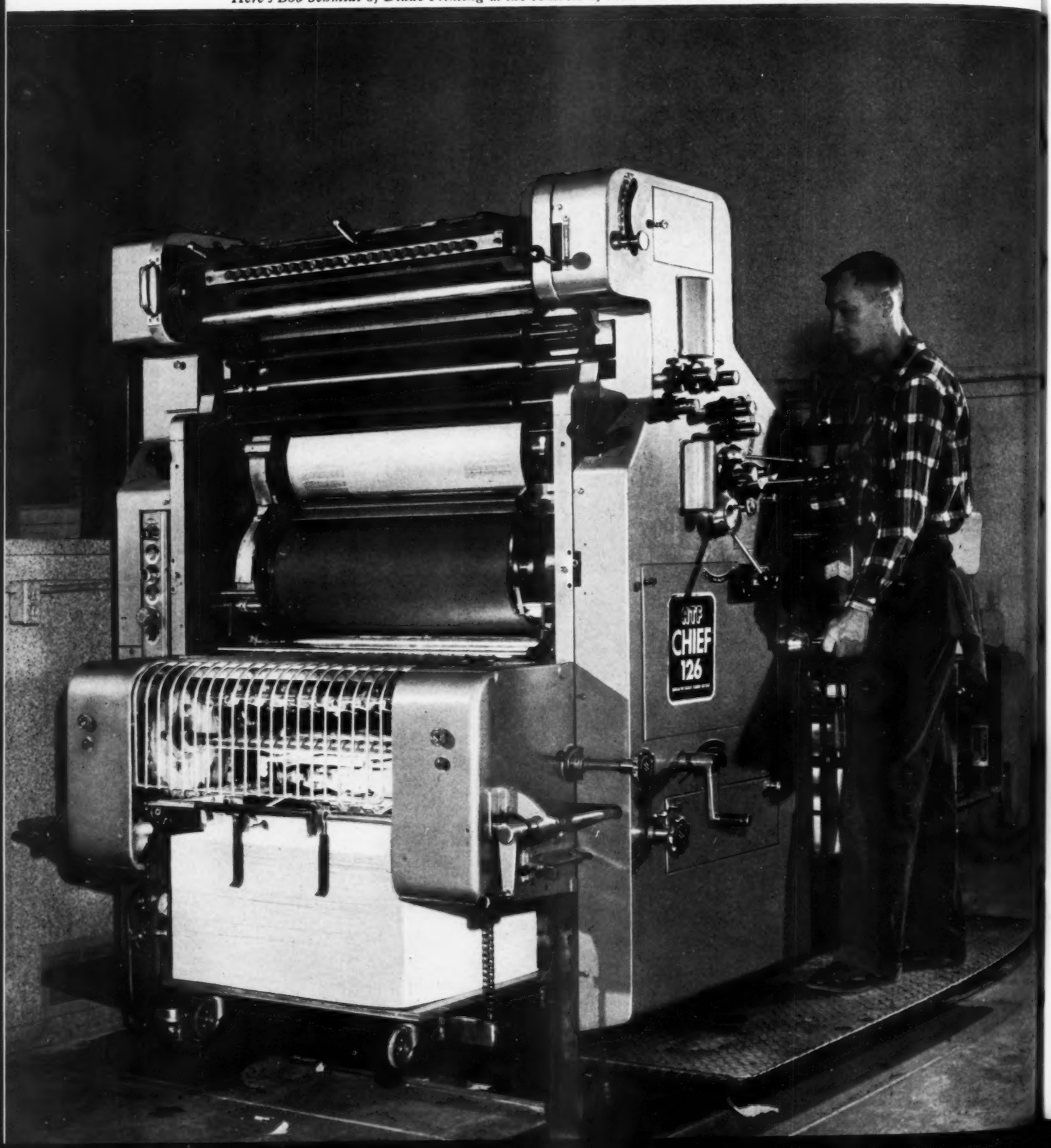
Pressroom equipment includes 4 SCOTT Black & White units, one Reversible Color Couple, 3/2 ratio folder. Color arranged for spot and Multi-Color printing. Circulation, over 35,000 daily.

(Photos courtesy of Le Nouvelliste)

For More Information Circle 156 on Reader Service Card

"Our only complaint is that ATF didn't come on the market sooner with

Here's Bob Schmidt of Didde Printing at the controls of their new 20 x 26" ATF Chief 126 Press.



the Chief 126"

DIDDE Office Supply and Printing Inc.
24 WEST SIXTH AVENUE • EMPORIA, KANSAS

June 1, 1960

Mr. A. L. Roberts
American Type Founders
210 West 8th Street
Kansas City, Missouri

Dear Al:

Thought you might like to know how our new Chief 126 is working out.

We're sold on it!

Depending on the stock, we're running between 7500 and 8000 IPH--and feel that this is a "comfortable" speed range, both for the press and the pressman.

On a series of religious books we do, it used to take us 28 hours to turn out an average run of 2,000 books using our old 14 x 20 press. Now, on the Chief 126, we get 2,000 books in 12 hours--and save folding and gathering time, as well as press time.

Another recent job required four different plates, and called for printing 25,000 impressions from each on 17 x 22" 16 lb. bond. The whole job (including ink-up, wash-up and all makeready) took us just 24 hours--an average of 33,000 impressions per working day.

We are amazed at the consistently high production we're getting, job after job. We average well over 30,000 impressions per day, and under the right conditions often go over 40,000.

Our only complaint is that ATF didn't come on the market sooner with the Chief 126!

Sincerely yours,

DIDDE OFFICE SUPPLY & PRINTING INC.

Bob Schmidt

Bob Schmidt
Production Manager

BS:rm

To: ATF Home Office
No other comment required!
Al R

Write for illustrated, descriptive literature and specifications on the ATF Chief 126.

ATF **American Type Founders**

200 Elmora Avenue,
Elizabeth, New Jersey

ATF Type Faces used in this advertisement: Craw Clarendon, Garamond

For More Information Circle 10 on Reader Service Card

HELPFUL LITERATURE

FOLDERS · Sales Aids · Instruction Sheets · BULLETINS · Catalogs · BOOKLETS · Brochures

Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

NEBITYPE HAND COMPOSITION MACHINE

An illustrated folder featuring the Nebitype hand composition machine has been offered by Lanston Monotype Co., Div. of Lanston Industries, Inc. Sponsor states that display type lines on slugs in 42 pica lengths may be produced on the machine in 9 sec. Circle No. 329 on Reader Service Card.

MODEL K ELROD MACHINE

A folder describing the new Model K Elrod machine has been issued by Ludlow Typograph Co. Circle No. 326 on Reader Service Card.

Platemaking

COLORTRAN CONVERTERS FOR LAMPS

Natural Lighting Corp. has prepared a chart showing the performance of lamps equipped with ColorTran Converters. The chart lists 14 lamp types, with intensity and coverage provided at different distances, and at both 110 V. and 220 V. Circle No. 318 on Reader Service Card.

SUPRA THIN ORTHO FILM

A folder describing Dinolith Supra Thin Ortho films has been published by Photo Products Div., Di-Noc Chemical Arts, Inc. One feature of the film is its polyester base which measures 0.002 in. thick and is said to eliminate danger of undercutting. Circle No. 316 on Reader Service Card.

BAUSCH & LOMB MAGNIFIERS

A catalog describing its line of magnifiers and readers has been published by Bausch & Lomb Optical Co. Included in the literature are round and rectangular readers, folding pocket magnifiers, surface comparators, vernier magnifiers, reducing glasses and focusing magnifiers for photographers. A price list is incorporated in the publication. Circle No. 309 on Reader Service Card.

DYCRIL PHOTOPOLYMER PLATES

A folder dealing with Dycril photopolymer printing plates has been prepared by E. I. du Pont de Nemours & Co., Inc. A listing of dealers and sales offices is included. Circle No. 346 on Reader Service Card.

COLOR PLATE ROUTER

An electronically controlled color plate router is described in literature prepared by Nolan Corporation. The basic unit routs four color plates simultaneously. Combined units will rout four, eight, 12, 16 or 20 plates in a single operation. The routing operation is programmed by electronic tape. Circle No. 327 on Reader Service Card.

EQUIPMENT FOR DIRECT PRINTING

Bulletin DP-71560 describing Curv-a-Plate and Mount-a-Plate equipment for processing plates for direct printing has been made available by Sta-Hi Corp. The Curv-a-Plate is employed for curving zinc or magnesium plates to fit press saddles; the Mount-a-Plate is designed to insure in-register mounting of curved plates on saddles. Circle No. 325 on Reader Service Card.

GOODKIN MODEL B PROJECTOR

The Model B projector designed for artwork, layouts, scaling and silk screen stencils is described in literature issued by M. P. Goodkin Co. The projector features a 12 in. by 15 in. viewing glass and 4 X enlargement to ¼ X reduction. Circle No. 320 on Reader Service Card.

Pressroom

ROLL HANDLING EQUIPMENT

An 82 page catalog illustrating and describing its line of unwind and rewind roll handling equipment for film, paper and paperboard has been offered by Champlain Company. The units were developed primarily for use with multicolor rotogravure presses, but are also applicable to webfed printing and fabricating machinery. Circle No. 310 on Reader Service Card.

SCOTT 3-2 RATIO FOLDER

Literature featuring its 3-2 ratio folder has been prepared by Walter Scott & Co., Div. of Wood Newspaper Machinery Corp. Reportedly, the folder has a maximum capacity of 128 full size pages with either cut or folded edge forward. Circle No. 331 on Reader Service Card.

INSTA-PRINT LETTERPRESS INKS

A color selector and mixing chart for Insta-Print letterpress inks have been made available by Flint Ink Corp. A solvent type, gloss ink, Insta-Print is designed for use with coated papers. The ink is available in halftone, job black and 15 basic colors. Circle No. 351 on Reader Service Card.

TWO COLOR PERFECTOR PRESS

The TPJ two color perfector offset press is the subject of a brochure published by Miller Printing Machinery Co. The press may be used to print two colors on one side of a sheet or one color on both sides. Circle No. 328 on Reader Service Card.

FLEXOGRAPHIC LABEL PRINTER

Literature on the Sohn label printer and die cutter has been prepared by Paxon Company. The machine prints and die cuts in one operation on pressure sensitive, gummed, heat seal or tag stock. Circle No. 322 on Reader Service Card.

SHEETFED GRAVURE PRESS

An illustrated folder on the L&M No. 7 intaglio press with swing out feeder has been made available by Champlain Company, Inc. Manufactured by Linotype, S. A. A. of Milan, Italy, the press is said to have a speed of 2000 i.p.h. and handle sheets ranging from 4¾ in. by 9 1/16 in. to 16 in. by 19½ in. by 0.020 in. Jobs to be printed on the press are engraved on copper plates which are then fitted to the cylinder. Circle No. 321 on Reader Service Card.

Bindery-Mailroom

PORTABLE PLASTIC BINDER

A booklet describing a portable punch and binder for applying plastic bindings has been prepared by General Binding Corp. The desk model unit is recommended for binding reports, catalogs and presentations. Circle No. 308 on Reader Service Card.

COMBINATION STRAPPING TOOLS

A combination strapping tool for packing is described in a folder prepared by Signode Steel Strapping Co. Reportedly, the tool performs four functions: tensioning straps, applying seals, making joints and cutting straps. Circle No. 311 on Reader Service Card.

GATHER-ALL COLLATORS

Specification sheets on the Gather-All line of collators have been made available by Didde-Glaser, Inc. Features of the collators include an operating speed of 6000 sets per hr. and maximum signature size of 64 pages. Circle No. 332 on Reader Service Card.

ELECTRIC STRAPPING MACHINES

A folder illustrating the M-20 series of electrically powered strapping machines

(*Continued on Page 93*)

For More Information Circle 202 on Reader Service Card→

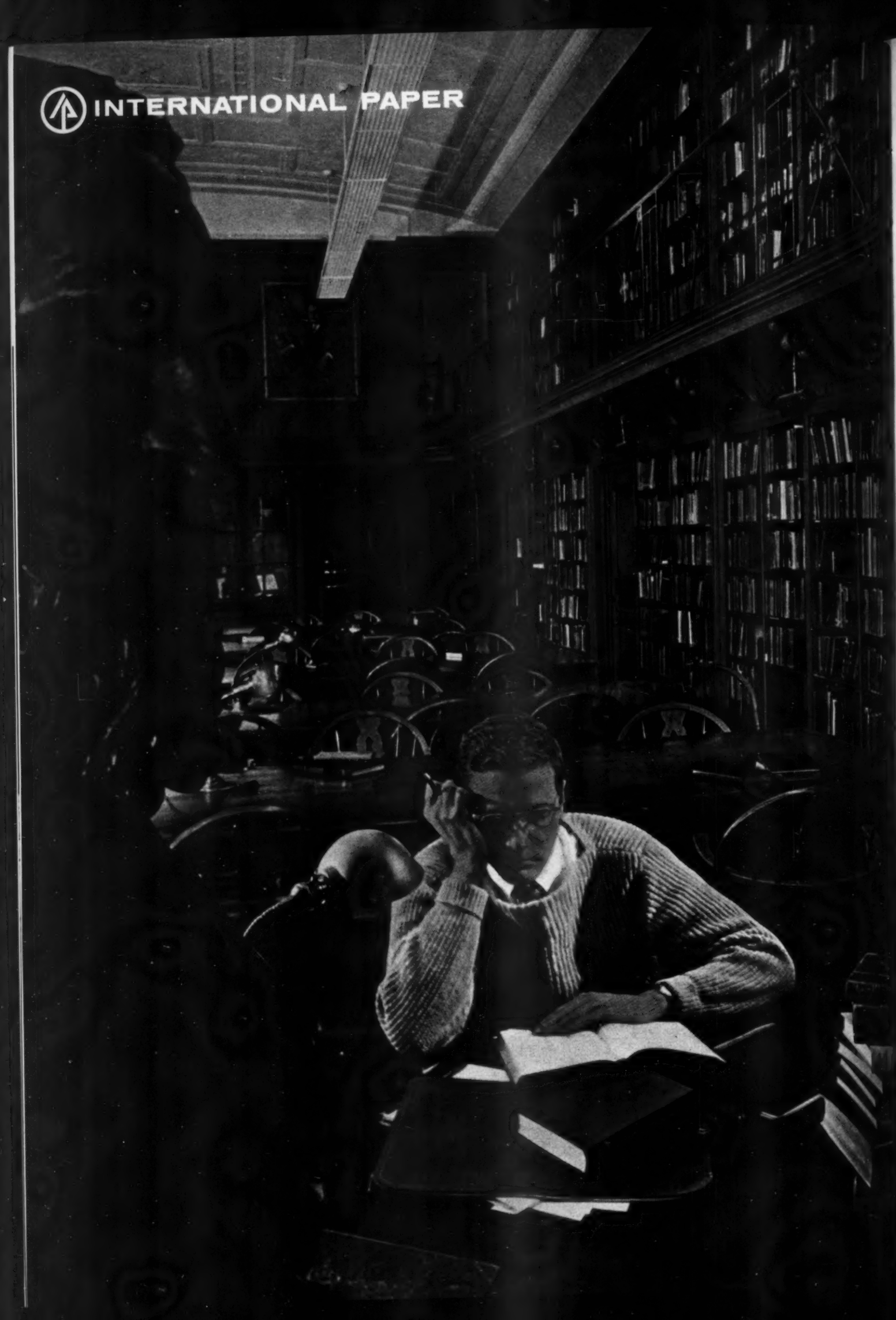
In the interest of reading

A message from International Paper

The advertisement on the following pages is the first in a series to encourage more reading among more people. The series has been appearing in *Fortune* and *The Reader's Digest* this year. It will be seen by an estimated 35 million people during 1960.

This is one of the best ways International Paper knows to help support the printing and publishing industries. Industries whose books, periodicals and other printed material enrich our lives and keep us the best informed nation in the world.

→


INTERNATIONAL PAPER

"Send me a man who reads!"

100 officers of leading U.S. companies read a total of 338 magazines, 53 books, and 1,490 newspapers a week, according to an independent survey conducted for International Paper.

WE asked 100 company officers, "How many magazines, books, and newspapers have you read in the past week?" The total of their answers: magazines, 338; books, 53; newspapers, 1,490.

Then we asked 100 men in the same age group whose salaries had never quite reached $7500 a year. 229 magazines for them—and only 28 books. That's about a fourth of a book apiece. The conclusion is as clear as print.

Men who read more achieve more.

Universities have encouraged the habit of reading among businessmen. Courses are offered in the Great Books. Promising young men are encouraged to take advantage of the printed page. Read Plato, they are told. Read Mark Twain. Read Shaw. Hemingway. Socrates. Make your own choice—but read!

Men on an up escalator

Since 1953, businessmen have been attending classes in the humanities at the University of Pennsylvania. And at Dartmouth and Williams, eight-week summer courses have been launched.

The men who take these courses may make more money as a result. But what if their income failed to rise by a single penny? They would still be wealthier beyond measure. For their interests have stretched galaxy wide—and will never shrink back. They have learned to take advantage of the knowledge preserved by print on paper.

Our factories and farms have made us the most prosperous of people. Our libraries, bookstores and newsstands have made us the best informed.

20 billion newspapers

Last year we put 800 million new volumes on bookshelves. We devoured over a billion magazines. More than 20 billion newspapers.

We choose better books than we used to. In a few months we bought a half-million paperback copies of *The Iliad;* 800,000 of *The Odyssey;* a million of *Wuthering Heights;* and 2 million of Shakespeare.

Magazines have transformed themselves to live up to this exacting audience. They have dropped excess verbal baggage. They have united print, pictures and paper to create a new, more exciting language.

The best of them are superbly honest, whether the subject is religion, space travel, or labor racketeering. They are exciting without being cheap, inspiring without being maudlin. They are as grave as life—and as gay.

Magazine sales up a fourth

That is why magazine readers keep coming back. It is why magazine sales have gone up 25 per cent in just the past nine years.

And worthwhile reading is not confined to books, magazines and newspapers. You may find an idea on the back of a matchbook that will change your life. You may find it on the side of a truck. Or on a flyer that came in the mail. Many of the most important suggestions you act on reach you through the printed word.

No less than 75 per cent of all American advertising is now in printed media. Print *sells.*

Reading is an active sport

Unlike TV or motion pictures, reading is not primarily a spectator sport. To be sure, it can provide escape from reality. But to read profitably you need a clear road between eye and brain. If you keep the road clear, the rewards are beyond price.

The significant ideas, events and personalities of history await your convenience on the printed page. You leave them when you wish, and when you wish you return.

Words become servants. Your awareness is more intense, your pleasures more vivid. Your mind is more richly furnished. The printed page makes you heir to the wisdom of the ages.

Read whenever you can—while you wait for airplanes, meals, haircuts, telephone calls. You will be the gainer.

Free reprints

For free reprints of this advertisement, suitable for schools and colleges, write Education Department, International Paper Company, 220 East 42nd Street, New York 17, New York.

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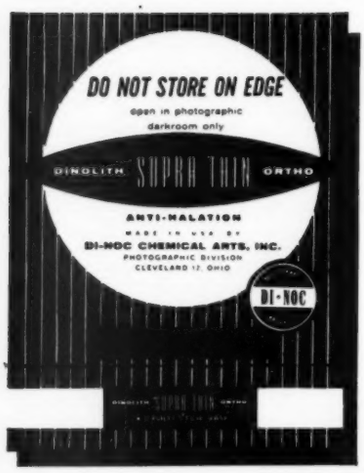

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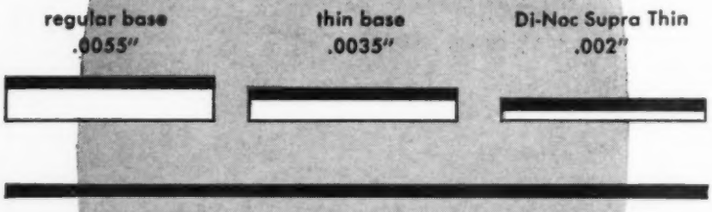

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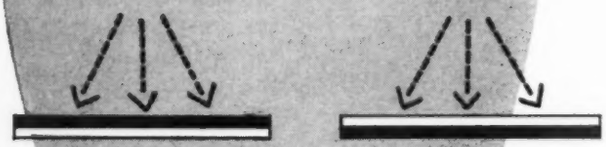

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For More Information Circle 205 on Reader Service Card

PRINTING PRODUCTION

Leadership: A Tribute and an Opportunity

The opportunity to become a leader in the printing industry is always open to vigorous, talented and far sighted men who display extraordinary ability in influencing the course of events. Looking back over the short span of a year, we recall some long-standing leaders who have faded from the Graphic Arts scene. Men such as Frank Sherman, J. Harold Mintun, James E. Bennet, Joseph S. Mertle and Joseph E. McMullen are among this select group.

But leadership is a continuous process. Without it, a nation or an industry does not progress; it lacks a sense of purpose. We owe praise to the greats of yesterday, but our allegiance now belongs to the leaders of the present and the future who must guide printing's destiny.

In tribute to yesterday's leaders, let us recognize Frank Sherman for typographic wisdom and for the role he played in founding and building the International Typographic Composition Assn.—

J. Harold Mintun, for tireless efforts to improve newspaper ROP color printing and for his enthusiastic work on behalf of organized research—

James E. Bennet, for helping to establish a workable code of ethics among the equipment makers and for his work as an officer of the National Printing Equipment Assn.—

Joseph S. Mertle, for assembling a world-famous library of Graphic Arts works, including a collection of historical firsts, and for establishing many acceptable photomechanical techniques—

Joseph E. McMullen, for continuous leadership of groups which fostered more modern newspaper production practices.

Men of such doing and caliber are not easy to replace. But their passing creates vacancies to be filled by new men who can meet the challenge of the industry's problems. There are many who have already attained this status and are the successors to the Shermans, Mintuns et al. We also feel confident that among the new generation of young men in printing many more will climb to the summit.

Production Future of

THE WEEKLY NEWSPAPER

Letterpress or Offset?

By RICHARD L. PINKERTON

FIRST OF TWO PARTS

THE weekly newspaper field, heretofore a traditional letterpress operation, is slowly turning to lithography. This will come as no surprise to many who are acquainted with the low capital resources, present obsolete equipment and high production costs which currently plague weeklies still in operation.

The change, though not apparent to the casual observer, shows there are also other changes in the future of the weekly newspaper industry. Centralized printing plants for producing two, three or more such papers are beginning to appear. Heart of the new look is web offset which offers high speed plus versatility.

Reasons for Study

These findings are based upon a statistical survey, undertaken to determine present operating characteristics and to gather information on future equipment plans of weekly newspaper publishers. Questionnaires sent to 2300 publishers resulted in a return of 594 which, under statistical rules, indicates a reliability of 90%.

At this point a definition of a weekly is necessary. It can be defined as a community newspaper usually published once a week in rural or suburban areas of metropolitan centers. In some instances a number of different weeklies are published by the same individual or company. These are known in the trade as multiple publishers.

Approximately 8300 paid weeklies are presently being printed in the U. S. In 1930 there were 11,205 weeklies and with few exceptions a slight decrease has taken place each year to the present level. Contributing factors to this decline have been the depression, World War II, increasing production costs, decline of rural populations and mergers among publishers. Future reductions, however, are likely to be nullified because of the increase in numbers of suburban weeklies in metropolitan areas.

ABOUT THE AUTHOR: Richard L. Pinkerton conducted this research into the weekly newspaper industry to partially fulfill requirements for his Masters degree in marketing. He is an economics graduate of the University of Michigan and presently attends the Graduate Business School, Western Reserve University. Pinkerton has, in the past, conducted several other research studies into the needs of the Graphic Arts industry. He is a member of the American Marketing Assn. and for the past three years has been a market research analyst for Harris-Intertype Corp.

According to survey results, 70% of those who responded publish only one weekly. Ninety percent of this amount also print their own paper. The remaining 30% are multiple publishers. A percentage breakdown of the 30% shows that 60% publish two weeklies, 19% control three, 11% publish four weeklies and 10% are responsible for five or more papers.

Most authorities agree that the number of multiple publishers has been increasing, will continue to increase and that the number of weeklies published by a single publisher will also increase. Rising production costs and the ability to centralize suburban weeklies appear to be the major reasons for this growth.

Seventy-two percent of the publishers surveyed indicated that products other than weekly newspapers were printed. However, 71% indicated that only 1% to 25% of press time was available for this purpose. Commercial work accounted for 43% of this business, shopping guides 22%, and 24% indicated that the time was used for miscellaneous work such as circulars, handbills and school newspapers.

Variations in Page Sizes

The most common page size for weekly newspapers is 16 in. by 22 in., folded trim size. This accounted for 24% of the 1406 page sizes listed by respondents. The second most common page size is 15 in. by 21 in. and accounted for 11%. Ten percent of the weeklies had a page size of 17½ in. by 21 in. which ranked third. The remaining 55% had a wide variety of sizes.

These results point out the many variances in sizes throughout the industry and the lack of standardization. Perhaps this is due to the variety of press equipment in use.

The average press run appears to be 3800 copies. Each paper has an average of 12 pages which amounts to 45,600 pages per press run. Pages per press run was used as an estimate of production since this is the objective, i.e., it is the quantity of printing which must be produced.

The survey disclosed that 73% of single weeklies and 57% of multiple weeklies were published on Thursday. The preference for Thursday is most likely due to the influences of weekend advertising.

Present printing press equipment in these newspaper plants is almost entirely letterpress. Table I provides a detailed breakdown of this equipment which shows 61% is sheetfed letterpress. Twenty-six percent of the letterpress equipment is webfed flatbed. At present, only 5.5% of all weekly newspaper printing is done by the lithographic process, but there are indications this figure is due for a sharp increase.

Comment by publishers indicates the great majority of press equipment was purchased second or third hand. The average age of all press equipment reported in the survey was 35 years. Several 70 year old presses were reported to be in use.

Sheetfed offset presses were not quite as old as the total average and many of the newer presses were sheetfed and webfed offset. Low capital resources, low printing volume and little concern for quality seem to be the main reasons for such heavy use of obsolete presses.

Table II points out that 63% of the publishers have not investigated other production methods and apparently are not considering changes in press equipment. The important entry is the 23% who have investigated other printing processes and press equipment.

Unfortunately, there are not any surveys available for comparison purposes. Hence, the establishment of a trend cannot be made. For example, 11% of respondents in Table II indicated they plan to subcontract or merge. It cannot, however, be used as a basis to predict a trend since it is unknown whether it is an increase. It is logical to assume, as mentioned previously, that subcontracting and mergers have and will

(*Continued on Page 94*)

TABLE I—TYPE OF PRINTING PRESS BEING USED BY 579 PUBLISHERS OF WEEKLY NEWSPAPERS*

Type of Press	No. of Mentions	Percent
Sheetfed letterpress	364	61.18
Webfed flatbed letterpress	154	25.88
Rotary stereo letterpress	41	6.89
Sheetfed offset	23	3.87
Webfed offset	10	1.68
Miscellaneous	3	.50
Totals	595	100.00

*The total of 579 is the number of publishers replying to this question. The remaining tables in this article have varying responses since all publishers did not answer all questions in the study.

TABLE II—METHODS OF PRINTING WEEKLY NEWSPAPERS INVESTIGATED BY 511 PUBLISHERS

Method	No. of Mentions	Percent
None	348	62.92
Change printing process (Type of printing press)	127	22.97
Merge with another publisher	29	5.24
Subcontract printing to another weekly plant	24	4.34
Subcontract printing to a daily newspaper	9	1.63
Discontinue subcontracting (Install presses)	8	1.45
Subcontract printing to a general commercial plant	7	1.27
Miscellaneous	1	.18
Totals	553	100.00

TABLE III—FUTURE PRINTING PRESS PURCHASE PLANS OF 135 WEEKLY NEWSPAPER PUBLISHERS

Type of Press	No. of Mentions	Percent
Webfed flatbed letterpress	43	29.24
Webfed offset	35	23.80
Sheetfed offset	30	20.40
Sheetfed letterpress	18	12.24
Rotary stereo letterpress	12	8.20
Add units to present presses	9	6.12
Totals	147	100.00

● *First of a three part series explaining lower cost techniques applicable to photoengraving and offset platemaking processes, in which the author predicts*

Pleasing COLOR Will Dominate Printing

By GYAN P. MADAN, *Color Analyst*

DURING the past few years color has become the focal point of our modern advertising and other printed matter. Experts and skilled technicians have spent a great amount of time and money in search for new and economical methods of color reproduction. They believe that color printing will eventually amount to at least 75% of our entire future reproduction. They also believe black and white reproduction will become limited to certain types of work and to certain printing shops. More customers than ever will become interested in color reproduction.

If the printing industry wants to survive, and if any of the houses doing only black and white work intend to stay in business, it is of great importance to find a fast, easy and economical method of color reproduction. This method need not be the best one, but work which can be sold should be produced.

Fig. 1—Here is shown how the black sheet is cut and punched to fit the gray scale and the transparency.

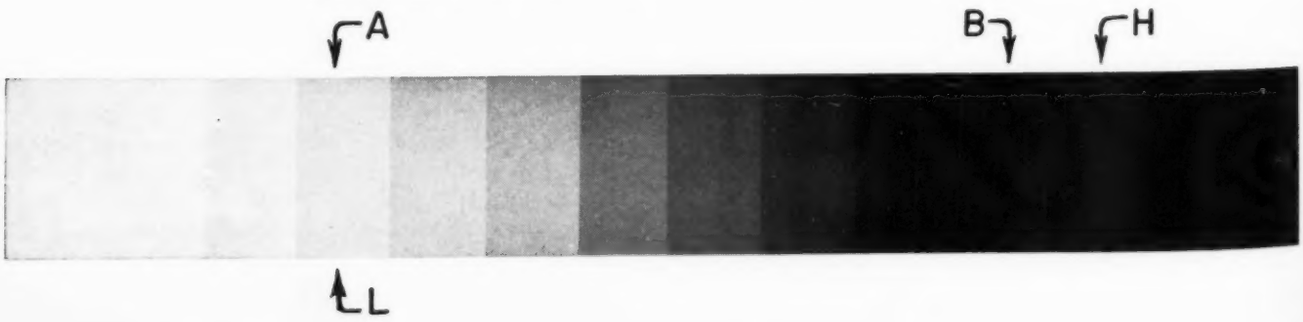
Without involving highly expensive equipment, material and labor, reasonably satisfactory work can be done. In other words, it should be the kind which will satisfy the requirements of numerous and different kinds of customers. To achieve this goal, it is most important that buyer and seller of color printing should settle at a point somewhere between the two extremes of quality and cost. The customer should not be too critical when he compares the reproduction with the original.

See Color Differently

Each person looks at colors according to his own viewpoint. His eyes may see an altogether different shade, darker or lighter, than some one else. Some color blind people are unable to see a color in its proper shade. Many additional factors may be responsible for the acceptance or rejection of a color reproduction. It is very difficult to satisfy everybody. All the factors just men-

Fig. 2—The marked steps of the gray scale are indicated by the initialed arrows.

A	Step Nearest to 0·40
B	Step Nearest to 2·50
L	Highlight of Original
H	Shadow of Original



MADAN

ABOUT THE AUTHOR — Gyan P. Madan is a color analyst in a New England area printing plant. He came to the United States in 1957 to serve as instructor of photolithography and printing production in the School of Printing Management, Carnegie Institute of Technology, Pittsburgh. He is a printing graduate of the College of Science and Technology in Manchester, England. He also holds a master's degree from Agra University in India. Madan became interested in lithographic printing at the age of 17 years. At that time he joined the Map Publication Office, Survey of India, Dehra Dun, India. There he spent seven years in learning about the complete follow-through of offset printing. More recently he spent some time at the Lithographic Technical Foundation's laboratories studying color correction and color printing problems.

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tioned can be eliminated easily if by a mutual agreement a way of color reproduction pleasing to the eye can be worked out at minimum cost. Both buyer and seller should settle for something which, in technical terms, can be named as *Pleasing Color*.

Having thus found the answer to our problem, we can proceed to explain the technique of *Pleasing Color*. This method has been carefully selected from among many available color reproduction techniques. It is applicable to photoengraving as well as to lithography. Its aim is not to produce a facsimile color reproduction but to achieve an overall effect of original transparency which is good enough to please the eye at minimum cost. And like other methods of color reproduction, the technique requires the knowledge, skill and equipment needed for any good color work.

Why Color Transparency Chosen

In this Part I of the series the technique chosen is intended for offset lithography. The original used is a color transparency. Offset lithography is chosen because the printing plates are easy to prepare. Modern methods of mechanical punch register are implied throughout the process. The process of platemaking is no longer a complicated one. The color transparency is chosen as the original because seven out of ten color originals now used consist of color transparencies. As the use of color and color films gains popularity, the supply of color transparencies for reproduction will increase.

To begin, a sheet of Kodalith Type 3 film or Dupont Ortho A Litho film is exposed to room light and developed in Kodalith A and B developer to produce a black sheet. This black sheet is then trimmed to the exact size of the glass of the contact register printing frame used for making masks and separations. Out of this black sheet two windows are cut, one to the size of the transparency and the other to fit a photographic step tablet (gray scale). The transparency and the step tablet are now attached to this black sheet, emulsion side up, in proper places, and two register marks are inscribed on the black sheet approximately in the center of the short side of the transparency. The sheet is then punched to fit the register pins of the contact register printing frame, as in Fig. 1.

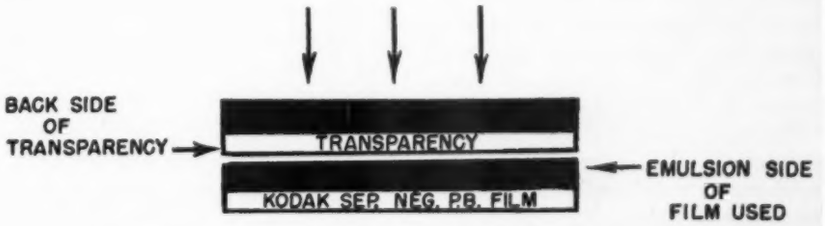


Fig. 3—Setup for making the mask for contact register printing frame.

Density Readings

Before the transparency is placed in the contact register frame, some transmission density readings are taken on an available transmission densitometer. There are a number of makes of transmission densitometers available on the market. Some are called Densichron, made by W. M. Welch Scientific Co.; Photovolt, made by Photovolt Corporation; QuantaLog, made by Macbeth Corporation, and so on. In this case, a Photovolt transmission densitometer was used and the highlight and shadow densities of the transparency were measured. The readings taken, as shown in Fig. 2, were as follows:

Shadow density of transparency 2.70
Highlight density of transparency 0.40
Density range 2.30

Then the transmission densities of the photographic step tablet are read and two steps are located: One having a density closest to 0.40 and the other one closest to 2.50. Step 0.40 is marked with letter A, and step 2.50 with letter B. We have chosen these arbitrary figures for steps A and B because practical experience has shown that for the majority of the transparencies suitable for masking these density values produce optimum results and, thus, could be used as standard values. Density readings of steps A and B will serve as our standard values throughout consideration of this technique.

Then the step on the photographic step tablet the density of which is equivalent to the highlight density of the transparency is marked with letter L. The step having a density equivalent to the shadow density of the transparency is marked with the letter H.

After completing these preparatory steps, the transparency is laid emulsion side down over the register pins of the contact printing frame. The steps to prepare the principal mask are now taken. Only

(*Continued on Page* 101)

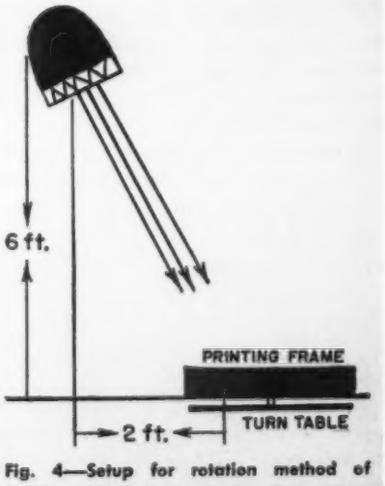


Fig. 4—Setup for rotation method of making diffused or unsharp mask.

● *Atlanta Craftsmen's convention draws 1000 attendance, discusses late printing developments, elects Edgar president.*

CRAFTSMEN HELP SATISFY

Big Appetite

A TECHNICAL program intended to satisfy the biggest of appetites for information on printing's latest process and equipment developments was staged last month in Atlanta at the 41st convention of the International Assn. of Printing House Craftsmen.

More than 50 speakers participated in 25 separate clinics which endeavored to include every aspect of printing plant operation, from typography to finishing. In addition, such specialty areas as business forms and packaging printing, were covered in the four day schedule of meetings.

A highlight of the convention, which attracted more than 1000 Craftsmen and their ladies to the Georgia capital, was the election of Robert M. Edgar to the presidency. Edgar, who is president of Neyhart Printing Co., Pittsburgh, succeeds Thomas L. Cooper of Atlanta.

The huge job of planning and administering the educational and social events was handled by a large committee of Atlanta Craftsmen under the direction of general chairman, Warren Taylor.

'61 Convention for Chicago

The 1961 convention will be held at the Palmer House, Chicago, on Aug. 6-9 inclusive. Gradie Oakes, International past president, will serve as general chairman.

In other important elections, Michael Imperial, member of the board of governors, was named to fill the vice president vacancy caused by the advancement of Edgar to presidency of the association. Imperial is manager of the Finishing Div., Skinner-Kennedy, Inc., St. Louis, Mo.

Former board of governors member, Harry M. Faunce, was elected treasurer. Faunce is connected with the Rumford Press, Concord, N. H., and lives in Boston.

Three new members of the board of governors were selected. (See officers picture, next page.)

Pearl E. Oldt, executive secretary, reported that the 115 local clubs comprising the International's membership experienced a total net gain of 494 new members for the fiscal year.

Among the items submitted in a report to the board by the advisory council was a recommendation to purchase a building in Cincinnati for the permanent housing of the International's headquarters office. J. Homer Winkler, Battelle Memorial Institute, Columbus, Ohio, is chairman of the committee which made the recommendation.

Photomodification Camera

The first technical session of the convention was entitled *The Future is Now*. Alan Holliday of the Craftsmen's technical commission was chairman. There were four speakers who covered photomodification camera, photopolymer printing plate, Brightype and the wrap-around printing press. (For summary of the latter talk, see page 51.)

Alvin Polland, president, Statmaster Corporation, spoke on his company's photomodification camera.

Polland said: "Time pressure and the increase of advertising volume have changed art service and advertising agency copy preparation procedures in the past few years. Today, closely affiliated specialists are interwoven in the mechanics of preparing printing and advertising copy.

"To meet the extreme pressure of increasing schedules and client demands, art service has turned to photography. The specially designed camera has simplified problems and created new vogues in eye catching printing."

The Statmaster, a combined camera-darkroom instrument, is an example of the move toward concentration of copy preparation sources and equipment. Polland stated that the Statmaster has made possible the production of reproduction copy by photography in the art department—thereby reducing or eliminating purchases for this material.

The Dycril photopolymer printing plate was discussed by Hugh B. Gage of E. I. du Pont de Nemours & Co.

After processing, Gage said the plate should not be subjected to temperatures above 175 deg. F. The limitations of the plate are few; one of these is unsuitability for printing against a steel surface. It is also unsuitable for molding stereotype mats by the hot method. Gage reported that the photopolymer material is practical for all plate and duplicating uses. Ordinarily, he said, the plate is immune to damage on the press. A new resin plate repair has been developed.

Gage announced recent price reductions ranging from 5% to almost 16% for the different types of Dycril raw plate material.

More Functions for Brightype

Some additional functions which may be employed to increase flexibility of the Brightype process were mentioned in the address of George Morrison, Ludlow Typograph Co.

Morrison reported that trade typesetting plants are finding increased use of Brightype paper positives instead of reproduction proofs.

A method being used on worn book plates is to convert by means of the Brightype to upgrade quality, and then make a letterpress plate from Brightype film. This letterpress plate may then be used to make a rubber plate. Morrison said this method is more economical than resetting the type.

When the positive film product of the Brightype is to be used for photoengraving, a negative usually is

By MacD. SINCLAIR, *Consulting Editor*
and JOHN WRIGLEY, *Correspondent*

for Knowledge

made from the positive. A reduction of operations would result if the positive is used direct.

The speaker reported that a positive working photoengraving resist has been developed by Chemco Photoproducts Co., Inc. It has been field tested for some time with encouraging results.

Morrison stated that in making letterpress duplicate color plates, it has been found economical to make a photoengraving by the usual method. The engraving is then converted to film in the Brightype. The Brightype film is then used to make powderless etched photoengravings. Two stage etching for holding pin point highlight dots has proved successful. The zinc plates can be dipped in a chrome plating bath for a few minutes for long runs.

(For report of wrap-around press by William Bradley, see page 51.)

The featured speaker at the convention's color and register control clinic was Earl C. Brown. He is publications service manager for McCall Corporation, Dayton, Ohio. The entire session was devoted primarily to development of plates and quality control in volume production of letterpress printed publications.

At the beginning of his address, Brown stressed that McCall's is as particular about its work for smaller publication customers as it is for those whose circulations run into millions of copies.

All of the original four and two color engravings received in the plant are in register. Checks, however, are made for edges, etching depth and over-all density. Engravers supplying plates are furnished identical proofing paper and inks currently used by McCall's.

Brown reviewed experiences with various types of electrotypes over a period of time. He said that heavy edges and broken or cracked plates forced the firm into adopting laminated plates using aluminum as a backing material. This plate consists of a perforated aluminum base with a plastic sandwiched between the lead backed shell and aluminum base held together with Pliobond and solidified with pressure and heat. Commencing with the use of laminated plates, tension lockup of the plates on the press cylinders was instituted.

The speaker said that while the laminated plate helped increase press speeds, the hand finishing cost is too great.

Printing Plate Research

To improve printing plate performance, a research and development program has been under way with the Bishop-Stansell Co. on the Bista plastic backed shell. In this plate a curved sheet of plastic is bonded to the copper-nickel-chromed shell without lead backing. Metal inserts are placed in the plate scarfs for rigidity while being held under tension on the press plate cylinder by hooks. This plate requires no pre-makeready at all.

The Color Line plate which is being used currently at McCall's on a number of the presses consists of the electrotype shell bonded to plastic base, then to aluminum, and then more plastic. The aluminum

New officers of the International Craftsmen's Assn. Seated, left to right: Michael Imperial, St. Louis, vice president; Robert M. Edgar, Pittsburgh, president; Harry M. Faunce, Boston, treasurer; Thomas L. Cooper, Atlanta, past president, and Pearl E. Oldt, executive secretary. Standing: Governors Alan S. Holliday, Kutztown, Pa.; Paul O. Giesey, Portland, Ore.; Robert M. Faerber, Birmingham, Ala.; Roy Gurney, Toronto, Can.; Robert M. Ritterband, Santa Monica, Calif., and Harold E. Sanger, Chicago.

between the two plastic sections gives the plate torque rigidity to stand up on long press runs.

Brown said that in his plant at Dayton, 16,000 electrotypes per month are made. In addition, the firm makes 7000 curved stereotype plates each month. He also commented that since the pressroom is furnished laminated scarfed, chrome-plated curved nickeltypes in good register, the color register problems are due primarily to paper. He discussed the firm's methods of checking press sheets for color.

Cooperation by the papermakers and research sponsored by the company, it is hoped, will eliminate most if not all color matching and color register problems.

Press Register Control

Panelist Frank H. Weick, of Electric Eye Equipment Corp., reported on the improved Hurletron electric eye web press automatic color register control. He said the new equipment is simpler to maintain. More transistors are being used. Heat producing elements such as filaments in tubes are being eliminated. The lateral guiding control previously was located on one side of the web. This has now been located in the center of the printed web.

Panelist J. J. Burns, General Electric Co. representative, briefly described G-E's use of color fluorescent lamp assemblies or units for making color separation plates and their use in color inspection booths in the pressroom for comparing press sheets with engraver's progressive proofs. A limited supply of *Colored Lighting for Color Printing* bulletins is available from General Electric.

Transition to Web Printing in Letterpress and Offset Plants

Webfed printing, in both letterpress and offset plants, was the subject of two talks given last month in Atlanta at the International Craftsmen's convention. The speakers, both heads of nationally prominent companies, based their presentations upon the experience gained from the installation of web presses in their plants.

A review of his firm's experiences with webfed letterpress printing for phone directory and publication printing was given by James E. Ward, president, Baird-Ward Printing Co., Nashville, Tenn.

In the early 1920s telephone directory printing had become of sufficient volume that the firm installed a rebuilt 64 page webfed single color press on which could be produced reasonably good newspaper quality work at 5000 signatures per hr. "At the time," said Ward, "there was very little know-how in the Nashville area for operating rotary presses. By main strength and awkwardness the company was able to convert sheetfed cylinder pressmen into webfed pressmen. A number of years passed before they became competent workmen. During this time we did manage to produce acceptable telephone directories to the point where the business grew to include five states."

Another step in the transition came in 1939. At this time a second rotary was installed with the then fantastic output of 6500, 32 page signatures per hr. By the time World War II began, Baird-Ward began specializing but the war interrupted its next expansion plans. In 1946, when equipment was again available, the company re-evaluated the printing situation to consider whether to add an offset department. They did not.

In 1949 Baird-Ward placed the first order for high speed rotary equipment, a step up to as great as 15,000 to 16,000 folded signatures per hr. A second installation was made in 1953 and production went to as great as 20,000 signatures per hr.

In the 1950s Baird-Ward started rotary press research with press manufacturers to develop a particular type press doing quality work at approximately 30,000 signatures per hr.

Ward related that during the transitory period, his firm worked closely with electrotypers for improvement of plates that would require the least press makeready. Better mounting of halftones and inspection of linecomposing material helped produce electros of a quality level that paid off the time and effort spent in inspection.

Room for All Processes

"We feel strongly that there is a place for each of the major methods of reproduction," he said. "While there may be some fringe overlapping between them, in the end each will come out with its clear place in the industry. They will complement rather than supplant each other." At this point he said that Baird-Ward is dedicated toward efforts in research and improvement of methods which will reflect better quality and lower costs with letterpress reproduction.

Ward stated that all the problems any printer could have and many that are unheard of occurred during the period of transition from sheetfed to rotary press operation. The problems were met and solved.

Baird-Ward follows the principle of training its own personnel and

A joint presentation entitled *The Future is Now* was a feature of last month's Craftsmen's convention. Participants included, left to right: William Bradley, Imperial Packaging Corp., Atlanta; Hugh Gage, E. I. du Pont de Nemours & Co.; unidentified; Alvin Polland, Statmaster Corporation, and George Morrison, Ludlow Typograph Co.

Additional Stories of Craftsmen's Convention Begin on Page 62

giving the long time employee a chance to go up, rather than to bring in outside trained men. This system, he said, has enabled development of techniques which have accrued to the company's benefit.

Transition to Web Offset

In the preamble to his address, Albert Love outlined the problems experienced by his firm with respect to expansion in building facilities and work volume together with contemplated web offset press installation. Love is president of Foote & Davies, Inc., Atlanta.

Love stated that growth for his company no longer existed in the sheetfed market. In addition, larger printing jobs were being sent out of the city to be produced on webfed letterpress, offset or gravure presses. The speaker said his associates felt the company didn't have a chance to grow with the present equipment. The sheetfed presses at that time in his plant were operated two and three shifts. He added: "The profits we were getting didn't appear to justify the strain we worked under to produce our volume."

After the company thoroughly investigated the field, it began to look as if a webfed offset press might be a good investment, provided the company had enough orders to justify so big and costly a purchase.

Love stressed the point that there should be enough work in the plant that can be switched to web press operation, as well as pending contracts, to justify purchase of such equipment.

Another point mentioned by Love was that installation of the web offset press would release the company's sheetfed press capacity through transferring some of the work to web production.

Having determined to buy a web offset press, Love related that it was decided to buy a four unit eight color press. Associated equipment would be a heavy duty high speed folder to fold the multiple webs on single and two color jobs. Also installed was an extra length oven to dry process jobs on coated stock. Other auxiliary equipment, which was unanticipated at the time, consisted of extra feed roll stands, overhead roll hoists, roll grab lifts, imprinter press, high speed sheeter, signature bundler and packer box.

Installation of the press also meant increasing capacity of the composing and platemaking rooms, and the installation of specialized inserters and stitchers and five-knife trimmers. To provide for these unanticipated expansion problems, it became necessary to erect a new air conditioned building adjacent to railroad trackage and provided with truck loading facilities.

Other problems arose. These consisted mainly of engaging a competent press superintendent and the training of people to operate the equipment.

Love's concluding comment was: "The web press is a worry and a pride. But whatever it may be, however costly and bewildering at times, when I see the quality of the work it produces, and the speed of production, then I know we at Foote & Davies are wedded to it—and we will never give it up."

Craftsmen Convention Groups

(All names read from left to right)

1—G. W. Bassett, Miehle Company, Div. Miehle-Goss-Dexter, Inc.; Ed Blank, New York Employing Printers Assn., New York, and Louis Croplis, American Type Founders Co., New York.

2—Warren Taylor, manager, Williamson Southern, Inc., Atlanta; William Evans, Craftsman Printing Co., Charlotte, N. C.; Roger Smith and Donald Fisher, both of Econo Products, Atlanta.

3—Tom Brady, Commerical Publishers Inc., Parsons, Kan.; Waldo M. Leisy, Norick Bros., Witchita, Kan., Ray Norton, Oklahoma City, Okla.

4—Cleveland Craftsmen: Henry Kobabe, Prompt Printing Co.; D. W. Stock, Lawrence Graphic Services; Howard Davis, Tower Press, Inc.; Edward D. Hill, Ohio Roller Co., and Lee R. Kornel, Nela Press.

5—Robert Peters, Standard Offset Printing Co., Reading, Pa.; Marion M. Jones, Everett Waddy Co., Richmond, Va.; Gerald Flood, Seward & Flood Printing Co., Santa Monica, Calif.; William Bell, Standard Publishing Co., Cincinnati.

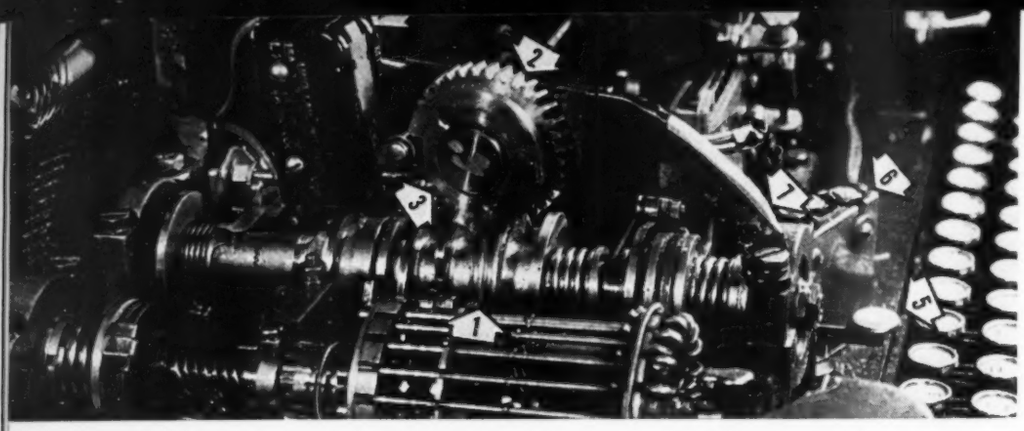


Fig. 1—Interior view of Teletypesetter tape perforators. The mechanism has been modified in the Raleigh (N. C.) *News and Observer* and the *Times*, by mounting worm gear *1* between the transfer bail and the punch hammer cams on the main shaft. The 35 tooth gear 2 is driven by the worm gear. When 35 keystrokes have been made by the operator, the lever-roller contact of Micro-Switch drops into cam notch to count one line of type.

Automatic Keystroke Line Counter For Teletypesetter Tape Perforators

By N. G. BLACKARD, *Mechanical Superintendent*
Raleigh (N.C.) News and Observer *and* Times

We have developed and are using a keystroke line counting device in our Teletypesetter tape perforating operation. The device described here is for automatically recording and computing the production of the operator. Every keystroke is counted and recorded.

Teletypesetter equipment is employed in many newspaper and commercial printing plant composing rooms. The paper tape produced on the perforator actuates a Teletypesetter operating unit mounted at the right side of an Intertype or Linotype keyboard. This unit, in turn, operates the linecasting machine to produce the type slugs.

We feel this counter will fill the requirements of any company desiring to keep accurate production records regardless of the width of line being set. The counter automatically compensates for lines of narrower or wider measures than the usual 11 pica newspaper column.

After composition in our plant of several million lines of 8 pt. type, set 11 picas wide, it was found that each line consisted of an average of 35 keystrokes. This is the type size and column width used by the majority of newspapers. If the character average per 1 col. line for a particular newspaper should be found to exceed or be less than this figure, than a gear *2*, Fig. 1, with more or fewer teeth as required could be installed.

Fig. 3 — This is a Veeder-Root electric counter which is connected to Micro-Switch *4*, Figs. 1 and 2.

At *1*, Fig. 1, is indicated a worm gear mounted on the main shaft of the perforator. It is positioned between the transfer bail and the punch hammer cams and is supplied with two starting points.

At *2*, also in Fig. 2, is shown a 35 tooth gear which is driven by worm gear *1*. Each time a keyboard key is depressed the main shaft turns half a revolution. Since there are two starting points on the worm gear, it is able to turn gear *2* one complete revolution whenever 35 keystrokes have been made.

A notched cam *3*, is driven by the 35-tooth gear *2*. The cam is attached to the gear by two machine screws.

A Micro-Switch *4* is provided with a lever and roller contact. At the thirty-fifth keystroke, the roller contact of the Micro-Switch drops into the cam notch to count one line of type.

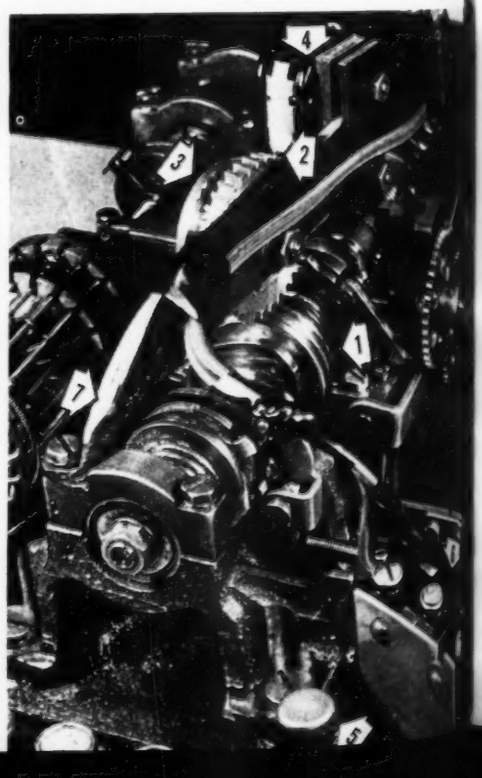
The Micro-Switch lever-roller contact is shown in counting position opposite cam *3*. All of the parts (except the worm gear) are mounted on a steel bracket *7*, Fig. 2. It is held fixedly in position.

When a composition error has been made by the perforator operator, it may be deleted quickly from the tape by depressing simultaneously the repeat Key *5*, Figs. 1 and 2, and the rubout key (not indicated in the pictures). The counting mechanism is inoperative while the rubout key is held down.

A second Micro-Switch, also supplied with a lever-roller contact, is shown at *6*, Fig. 2. The switch lever is operated when the perforator latch key is depressed. Its purpose is to prevent the operator holding down any keyboard key and the repeat key *5* simultaneously. In this way, false counts are eliminated. Depression of the repeat key lifts the Micro-Switch lever contact, opens the electrical circuit and prevents the registering of a line of type.

A Veeder-Root electric counter *8*, Fig. 3, is connected to the Micro-Switch *4*, Figs. 1 and 2. The counter itself may be placed in any desirable location.

Fig. 2—At the Raleigh (N. C.) *News and Observer* and *Times*, the Teletypesetter tape perforator has been modified so that the Micro Switch lever *6* is operated when the latch key is depressed. Its purpose is to prevent holding down any key and the repeat key simultaneously thereby producing false line counts.



Litho's Big Gain in

PACKAGING

. . . reasons given indicate research and technical developments have been major factors in growth.

By MICHAEL H. BRUNO, *Research Director*
Lithographic Technical Foundation

CARTON printing, once a stronghold of the letterpress industry, is swinging more and more to the lithographic process. This statement can be defended with the following statistics. In 1953, the number of lithographed winners in the annual folding carton competition were less than 10%. In 1954, 12% of the winner's products were printed by lithography. The number jumped to 20% in 1957, and in 1958, 40% of the awards went to cartons printed by offset.

Lithography has enjoyed a phenomenal growth in a letterpress dominated industry simply because letterpress has been too inflexible to keep up with changes in demands of the packaging industry.

The disadvantages of letterpress printing on board are well known. The major one has been variation in surface characteristics and caliper of the board which makes it impossible to attain quality reproduction with screens finer than 100 line. Another disadvantage is the high cost of original and duplicate plates and the necessity of makeready. With flatbed presses there is the additional disadvantage of slow speeds.

Lithography on the other hand has features that eliminate the disadvantages of letterpress. The offset blanket helps to compensate for surface irregularities and caliper of the board. Plates are easy to make and are reasonable in cost. A minimum of makeready is needed and offset presses run at two to three times the speed of flatbed presses. In addition, lithography uses less ink and dries faster with smaller quantities of anti-offset spray.

It may be argued that rotary letterpresses can run at speeds comparable to offset presses, and that production is slightly higher and operating costs are slightly lower. The fact still remains, however, that rotary letterpress has the disadvantage of high plate and makeready costs and the inability to produce fine line screen illustrations.

Much of the growth of lithography is due to the existence and activities of the Lithographic Technical Foundation. While lithography has many advantages which fulfill the needs of the packaging producer, there are a number of developments that have been made recently by LTF. Many new developments are being worked on now that will make it an even more desirable process for packaging. These developments will result in reduction of cost, improvements in appearance, and better consistency in quality and color reproduction.

Plate improvements are among the most important developments in lithography in the past 20 years. The inconsistency or undependability of plates was the most serious disadvantage of lithography which kept it from being used for many types of work. Research has changed this situation completely. Now there are many types of reliable plates that can be depended upon to print consistently for short runs, medium runs, and runs into the millions. The big problem in a plant today is not how to make a good plate but which plate to use.

There are at least four different presensitized plates which are good for runs up to approximately 20,000 impressions. There are also a number of wipe-on processes which use diazo coatings on specially treated aluminum. Wipe-on plates cannot produce the quality that presensitized plates do, but they are capable of longer runs.

Surface treatments and new lacquers have resulted in substantial improvements in ordinary surface and deep-etch plates on zinc and aluminum. These are used for runs between 100,000 and 200,000 impressions. LTF is working on a wipe-on process for zinc that shows promise of printing quality reproductions in the range of surface plate runs.

Copperized Aluminum Plates

The most popular plate is generally referred to as the copperized aluminum plate. This consists of a deep-etch plate made of aluminum on which copper has been chemically deposited in the image areas. The copperized aluminum plate has produced more than two million impressions, and pressruns on board stock have gone as high as 500,000. Plates of this type which are made on either brush or very fine grained aluminum are capable of high quality reproduction.

Plates which have one or more metals electroplated to the base metal are called bimetal plates. These plates are used for extremely long runs or where conditions demand an unusually durable plate.

The Aller plate has an image metal of copper electroplated to the non-image base metal of stainless steel. The Lithengrave plate has copper for its image area which is electroplated on aluminum. The other type of bimetal plate, which is always made from positives, consists of chromium as the non-image metal, plated on an image metal of copper. These two metals are electroplated to a base metal of zinc, aluminum or steel. The only plate of this type readily available is the Lithure plate. Electroplated bimetallic plates are capable of high quality reproduction because they are practically grainless.

Abrasion of images is a serious problem in packaging, especially when running the lower grades of board. Copper images, preferably

electroplated, have shown much better resistance to abrasion than lacquers or other image materials.

Newer plates have made it possible to print with less water on the press than was formerly needed. With the need for less water, however, dampening on the press has become more critical.

Dampening Systems

The conventional dampening system consists of a water fountain in which a metal or linen covered roller rotates. A molleton covered ductor roller, a metal oscillating distributor roller, and two molleton covered form rollers which contact the plate complete the typical system. Many other types of dampening systems have been tried such as sprays, condensation, etc., but none have been successful in replacing the conventional system.

The first successful departure from the conventional dampening system came about five years ago with the substitution of parchment paper for the molleton covers on the plate form rollers. Paper dampeners have been very successful in a number of plants achieving a better control over dampening than is possible with conventional dampening systems. Even with this system, however, the ink-water balance is critical to adjust and difficult to maintain.

Among other dampening methods that have been tried is the Mullen or Effusor system. In this method a large amount of solution is applied to the plate. An air blade blows off the excess which is drawn away by vacuum. One of the main advantages claimed for it is the reestablishment of the ink-water balance in two to three sheets after a press stop. This is due to the minimum amount of water which is necessary for dampening the plate. The major disadvantages of the system are cost, maintenance, and power requirements.

The Dahlgren System

The most promising approach at this time to the dampening problem is the Dahlgren dampening system. In this method the dampening solution contains approximately 25% alcohol and is fed directly onto the first ink form roller. This roller does the dampening as well

(*Continued on Page 96*)

NAPL to Explore Cost, Quality, Production at 28th Convention

QUALITY control, production, costs and research will be discussed when the National Assn. of Photo-Lithographers gathers for its 28th annual convention, Conrad Hilton Hotel, Chicago, Oct. 5-8.

The convention will be called to order at 2 p.m., Oct. 5, by Stanley R. Rinehart, NAPL president. Topic of that first session will be costs—

RINEHART

SODERSTROM

costs from the small lithographer's viewpoint, budgetary planning and control, depreciation and salvage values and profit improvement through management controls.

Officers of the NAPL, in addition to Rinehart, are: J. Tom Morgan, vice president; William H. Glover, Jr., treasurer; Walter E. Soderstrom, executive vice president; Robert S. Emslie, Jr., executive secretary, and Frank R. Turner, cost accountant.

The changing world of lithographic equipment, supplies and services will be demonstrated at the annual equipment exhibition, also scheduled to be opened on Oct. 5. According to reports, the exhibition by manufacturers and suppliers will be the largest ever at an NAPL convention, with 118 exhibitors reserving space.

Quality Control in Practice is the topic of the clinic to be held on Oct. 6. Moderator of the session will be George G. Carnegie, vice president, Consolidated Lithographing Corp. Specific areas to be covered during the clinic include: Establishing quality control, materials and equipment in quality control and quality standards in offset.

Specific suggestions for a plan of growth for lithographers will be made during the morning session on Oct. 7. Talks on production control in small plants, merger in the lithographic field, and research conducted for the improvement of the lithographic properties of zinc will also be given during the session.

In the afternoon of Oct. 7, following a luncheon meeting of the new board of directors, those at the convention will hear talks on specialized topics. Areas to be covered include: Photographic derivatives, new tools for use in management decisions, and lithographic printing on aluminum foil.

Answers to Production Problems

The last day of the convention will be devoted to a workshop on production problems. Moderator for the panel discussion will be William J. Stevens, Miehle Company, Div. of Miehle-Goss-Dexter, Inc.

Panel members and their areas will be: Camera—James J. Farrell, plate department foreman, Inland-Magill-Weinsheimer Co.; platemaking—Harold C. Dethlefsen, president, Process Litho Arts, Inc.; press—Otto Smith—pressroom superintendent, Photo-Press, Inc.; ink—Leonard E. Dama, ink department superintendent, I. S. Berlin Press; technical—Michael H. Bruno, research director, Lithographic Technical Foundation; paper—Free M. Truesdale, manager quality control, Nekoosa-Edwards Paper Co.

MORGAN

GLOVER

EMSLIE

TURNER

This wrap-around printing press has been in production operation for three months in the plant of Imperial Packaging Corp., Atlanta. President William Bradley is shown at far right.

Wrap-around Press Experience

By WILLIAM BRADLEY, *President, Imperial Packing Corp., Atlanta Ga.**

WE have had in operation in our plant for almost three months a Harris wrap-around press. This report will concern some of our findings, some of our successes, and some of the things we feel are yet in the future insofar as this particular type of printing is concerned.

The machine is built on the same frame as the Harris 23 in. by 30 in. offset press and has the same feeder and delivery, as well as the same rollers and inking fountain. The principal difference is that on the wrap-around press there is a special inking blanket cylinder where the plate cylinder is located on the offset press.

The normal blanket cylinder on the offset press becomes the plate cylinder on the wrap-around press. The impression cylinder is common to both presses, the difference being that on the wrap-around press this cylinder is bearered to the plate cylinder. It is equipped with clamps and reel for packing much as you would find on any standard letterpress.

The blanket cylinder is undercut 0.075 in. to provide for the use of a standard thickness blanket plus makeready to the proper height. The plate cylinder is undercut 0.038 in. which will accommodate a plate up to and including the standard 0.032 in. zinc plate commonly used by photoengravers, plus packing to the proper printing height. The back, or impression, cylinder is undercut 0.035 in. to provide for running different thickness stock up to and including 30 pt.

All cylinders ride on bearers which permit with careful makeready packing, very close pressure tolerances between inking blanket and plate, and between the plate and the stock being printed.

A special blanket, having a smooth surface, is mounted on the top or blanket cylinder, and packed to bearer height. A thin relief plate, etched to shallow depth as compared to standard letterpress etched plates, is wrapped around and clamped to the middle cylinder much as you would mount a standard lithographic plate. The back or impression cylinder is packed with tympan and draw sheet to proper printing height for the stock being run.

We have used practically all types of inks on our press, including standard letterpress oil inks and fast setting synthetic base inks. We have used standard lithographic inks, and ethylene glycol inks. The only limitation as to the inks you use is to be sure that the rollers and the blanket are compatible with the fast-set synthetic base inks, and with the glycol inks, if these are to be used.

Our press has been used almost exclusively for printing food labels on heat-seal 60 lb. Kromekote stock, using either the heat-seal, fast-set synthetic inks or the ethylene glycol type inks. All labels are printed by 133 and 150 line screen color process. Plates are made from the same color process negatives we use on our offset presses, and are etched on zinc by the Dow powderless etching process to a depth of 0.006 to 0.010 in. in the line and open areas. We have used standard 0.032 in. zinc. More recently we have been using 0.025 in. thick zinc plates with an etching depth of 0.006 in.

Our experience so far indicates that the 0.025 in. plate and the etching depth of 0.006 in. to 0.007 in. is much to be preferred to the 0.032 in. plate etched to a depth of 0.009 in. to 0.010 in.

Packing the Cylinders

We pack the inking blanket with standard tympan paper to give a squeeze to the plate of not more than 0.003 in. We have printed with an inking pressure to the plate of 0.0015 in. but it is difficult to get a blanket that is smooth enough and uniform enough in thickness to make this small pressure practical.

We pack the plate with standard tympan paper to bearer height. The impression cylinder is packed with an uncoated offset or ledger paper, and standard tympan sheets. For a draw sheet we use Du Pont's clear Cronar calendered film.

Our normal procedure is to put at least two sheets of approximately 0.006 in. ledger paper next to the cylinder. This is followed by enough tympan sheets plus the film draw sheet to give a printing pressure for 0.002 in. to 0.003 in. The softer offset or ledger packing sheets next to the cylinder are necessary to provide a little give in the packing to take care of any small variations in the thickness of the printing plate. It is placed as far away from the draw sheet as possible, so that these softer sheets will not beat down and loosen the packing to a

(*Continued on Page* 98)

*Abstract of address given before International Craftsmen's convention held in Atlanta, August 1960.

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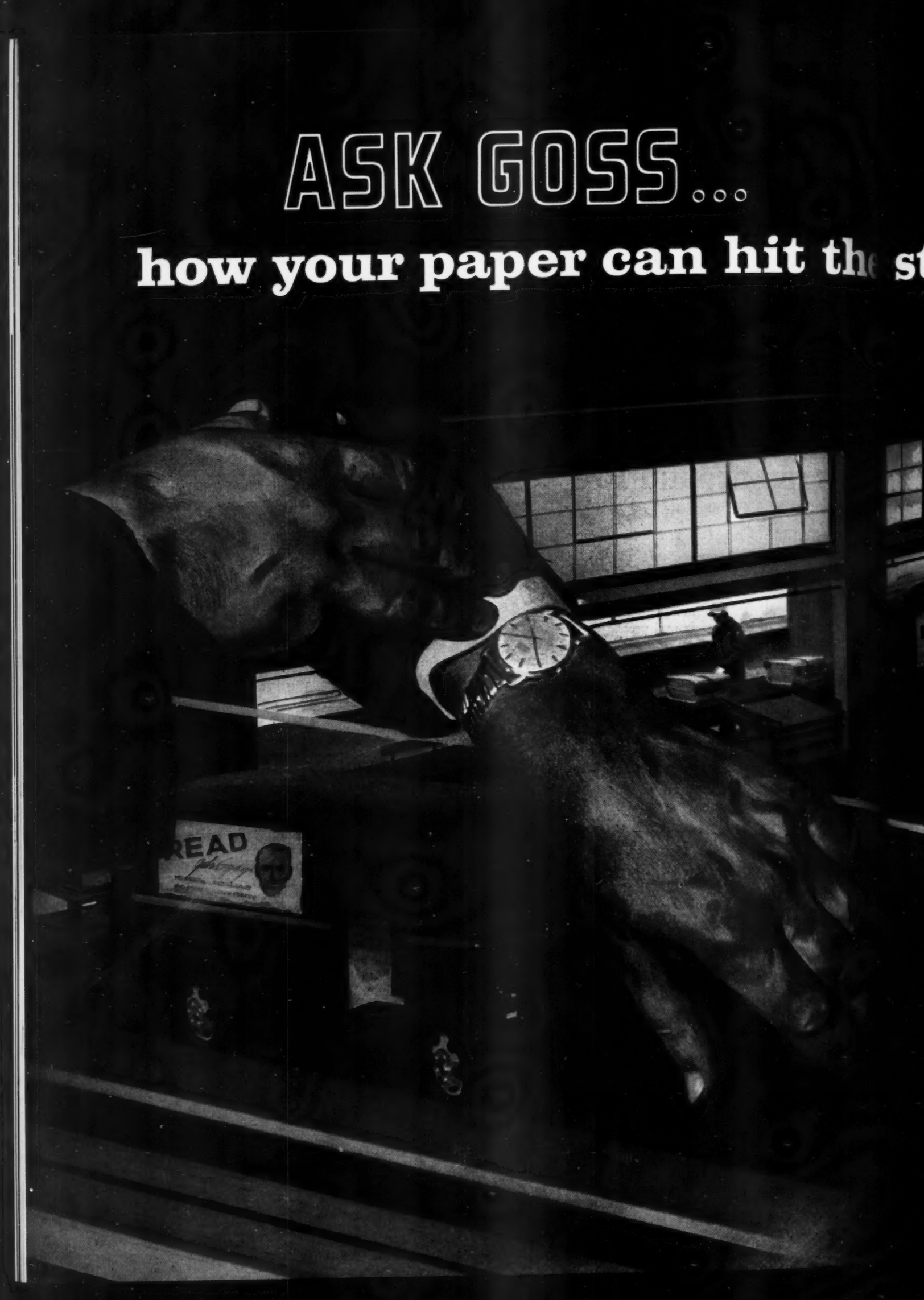

street sooner

Hot reporters and lucky breaks may start a scoop—but it takes fast and dependable *plant production* to put all the latest news in the readers' hands first.

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Abilities, experience, equipment—Goss is long on all three. Better prepared to advise and work closely with you in planning, equipping, modernizing and coordinating every phase of your entire plant operation for faster, more economical production. Get in touch with Goss.

3 out of 4 American daily newspapers are printed on Goss presses

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For More Information Circle 72 on Reader Service Card

The etching room at the gravure division of Triangle Publications, Inc., responsible for the printing of all feature material for TV Guide's 60 editions. Etching of type matter is completed three hours after it arrives at the plant.

7.25 MILLION Weekly Print Order for 15 Plants

By JOSEPH W. DRAGONETTI, *Philadelphia Correspondent*

THE coordination, pressures of scheduling and the maintenance of deadlines which are involved in the printing of 7¼ million copies of *anything* each week can hardly be imagined. When the item involved is a magazine of national stature, printed in a number of different printing plants coast-to-coast, these factors are compounded tremendously.

The circulation of *TV Guide* (7¼ million) is said to be the largest of any weekly publication in the country. The magazine is printed in 60 separate editions because of the regional nature of the program listings and is distributed to most sections of the United States and parts of Canada.

Headquarters for the magazine are located at Radnor, Pa.; while its management is situated in Philadelphia. The management, Triangle Publications, Inc., inaugurated the nationwide distribution in April, 1953. Printing of the publication is accomplished by the gravure division of Triangle which is also affiliated with the Philadelphia *Inquirer* and prints the roto supplements for that paper.

Each of the 60 editions contains identical feature sections, printed in rotogravure by the gravure division of Triangle Publications, Inc., Philadelphia. In addition, Triangle also prints program listings for 11 regional editions in the East. Feature and program listings for these 11 editions comprise 50% of the total circulation.

Program listings for the 49 other editions are printed by 14 different printing plants scattered across the U. S. Copy deadlines for these listings vary slightly. A number of editions close Friday, prior to release to newsstands the following Tuesday or Wednesday. Others close Monday but are also available to the public on the days mentioned.

Changes In Listings

The date of each issue falls on a Saturday; hence editions carry listings of programs from that day through the following Friday. This type of schedule allows for late changes in listings and even feature sections contain special articles on recent happenings.

Because local program information is of intense interest to readers, extreme care is always exercised to

insure correct listings. This programming activity is coordinated in New York, where national program listings are sent by Teletype to individual edition offices. To assure accuracy and to help meet deadlines, regional edition editors often make trips to the various printing plants to make last minute changes.

According to John J. Quinn, director of production for *TV Guide*, the program sections include signatures which total either 40, 48, 56, 64, or 80 pages. Type has to be set for approximately 2800 pages of program listings for all editions each week. This work alone is one of the largest weekly typesetting jobs done by any magazine.

Quinn listed these policies which have made scheduling of this magnitude possible: (1.) A fixed production schedule for each edition. (2.) No changes can be made in the schedule except by consultation with the main office. Thus, the system is rigid, yet flexible to meet emergencies. (3.) A close relationship among all the printing plants involved, *TV Guide's* 31 offices and headquarters is maintained.

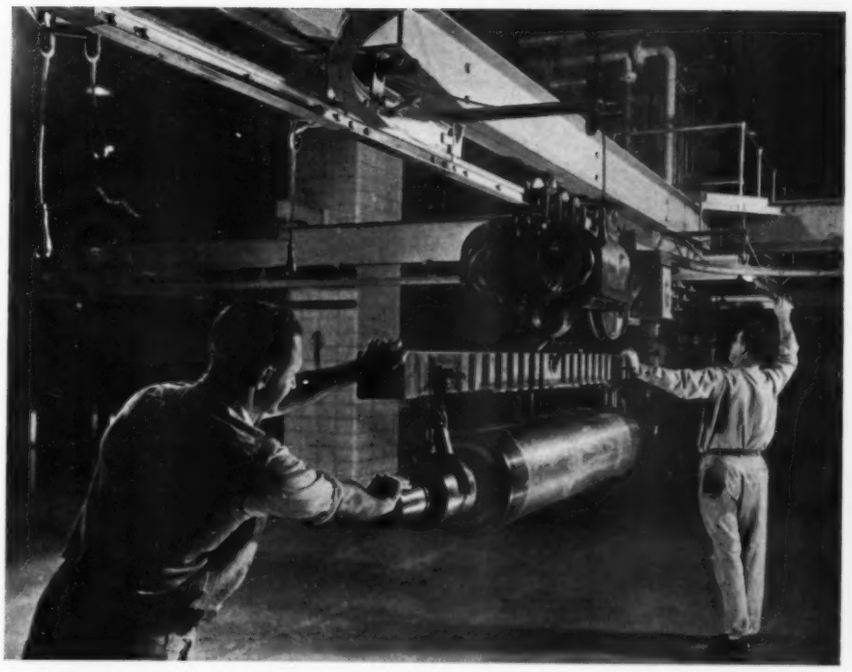
At each regional office, production follow-through is an important segment of activities. Individual editors are held responsible for layouts, which are made for each page for each edition to help guide printers.

Companies Printing Listings

Feature sections are shipped after printing at Triangle to the other printing plants, where program listings are printed for remaining editions. These are printed by lithography except for the Southern and Northern California editions which are done by gravure.

The 14 other plants producing program listings are: Craftsmen Press, Seattle; Deseret *News* Press, Salt Lake City, Utah; California Rotogravure Co., Inc., Los Angeles; American Printing & Lithograph Co., San Francisco; The Steck Co., Austin, Tex.; Henry Wurst, Inc., Kansas City, Kan.; Foote & Davies, Inc., Atlanta; A. D. Weiss Lithograph Co., Miami; Midwest Printing Co., Minneapolis; Rosenthal-Kaufmann, Inc., Cincinnati; Midcity Press, Philadelphia; Hirschfield Press, Denver; Pickwick Press, Pittsburgh, and the Scranton Lithograph Co., Scranton, Pa.

Quinn said that although there are very few variables in the production control system, the coordinated plants are flexible enough to meet special conditions.



A portion of the mile long system used to transport heavy gravure cylinders through various processing stages. Cylinders are hoisted by an electric lift and are guided to various destinations by means of switches, one of which can be seen at upper left.

Since Triangle prints feature sections for the entire circulation, it is necessary to set up deadlines for advertisements. For example, four color ad positives are due at the gravure plant 40 days prior to the issue date. Four color editorial art must be at the plant 31 days before date of issue.

The Dultgen process is used for the color work, which is playing a bigger role in the magazine all the time. To eliminate time and misunderstanding of color requirements in the printed reproductions, both magazine and engraving plant have installed Macbeth Chromocritic transparency viewers and Macbeth flat copy and proof checking cabinets. Consequently, standard lighting conditions prevail both at magazine headquarters and printing plant.

The large rotogravure plant was opened in 1949 and includes more than 70 press units.

There was a time when only one press, an eight unit Hoe, could produce the print order for the feature section. The magazine's circulation, however, has increased at least a million copies each year in the first several years of operation and has grown beyond the capacity of one press. From two to four Hoe presses, which are fitted with a special folder developed by the plant, turn out the program sections for the 11 editions.

Plant Alterations

To make it possible to meet deadlines, certain alterations in the plant's facilities were necessary to comply with *TV Guide's* pocket size when the publication became national in scope. One of these alter-

Pressman checks a proof of *TV Guide* produced on press in background. Equipment at the plant includes 70 gravure press units.

ations was the folder mentioned above. Etching of type on cylinders at the gravure plant has been developed so that it can be accomplished in approximately three hours after arrival of type matter. Another innovation at the plant was the installation of an ink solvent recovery system. This system draws the released chemical vapors from the ink and returns them in condensed form to the recovery tank for reuse in the ink supply.

Since time is important, feature sections for more distant distributing points are run off the presses first. The first feature sections are shipped from the Philadelphia plant to the West Coast and subsequent feature sections off the press go to plants progressively closer to Philadelphia.

While *TV Guide's* production program runs smoothly today, many refinements had to be developed in the first several years of operation to achieve this efficiency. A company spokesman said that in the early months of operation, the Philadelphia plant was producing more than 800,000 copies of the feature.

In addition, the gravure division was also printing program sections for the Philadelphia edition and part of the New York metropolitan edition. Gradually the company acquired the responsibility for printing the program sections of 11 editions as new editions were added and others were split in a phenomenal growth pattern.

Albert Ferg, plant manager, gravure division, pointed out that in the first months of publication, makeready for the magazine was originally scheduled for 8 a.m. on Thursdays. As circulation increased, the need increased for dispatching copies of the feature sections to all parts of the country on tighter schedules. Thus, it was necessary to move the press start ahead a day.

A production worker at Gates Bindery, Kansas City, Mo., checks copies of *TV Guide* magazine containing samples of a fruit drink.

Late Scheduling—Higher Costs

He said that meeting shipment times to plants scattered from coast-to-coast not only involves shipping schedules, but an important economic factor—higher costs. Any delay in meeting the late-week train shipping schedule increases these costs considerably. "So, you can see

(*Continued on Page* 100)

Insert containing sample of flavored drink being placed on gatherer in bindery of Triangle plant. It is believed to be the first time that a food sample has been included in a magazine.

RIT Talks on Information Center

A tentative program for a conference on the feasibility of a centralized Graphic Arts information service has been announced by Rochester Institute of Technology. The conference, to be held Oct. 13-14, is scheduled at the Towne House Motel, Rochester, N. Y.

Allen Kent, associate director of the center of documentation and communication research, Western Reserve University, will be the keynote speaker. The morning session on Oct. 14 will consist of five minute reports from personnel in the Graphic Arts who have a need for an information service, and five minute reports from those who now conduct information services in the industry.

The afternoon session will consist of discussions on pertinent questions in an effort to determine if the industry needs such a service; the kinds of service required; type of information to be handled; financing, and location of such a center. In addition, an effort will be made to decide who will be responsible for continued effort in this direction.

The registration fee is $20 for the two day conference. More information may be obtained from Harold Kentner, Director of Extended Services, Rochester Institute of Technology, Rochester 8, N. Y.

IAES to Meet in Mexico City

Mexico City, Mexico, is the site of the 63rd annual convention of the Intl. Assn. of Electrotypers & Stereotypers, Inc., to be held Oct. 24-27, at the Continental Hilton Hotel.

Five convention sessions, a banquet, a luncheon, a bullfight and tours of Mexico City are planned for IAES members and their families. Registration of members and guests is scheduled to take place on Oct. 23 and Oct. 24. The board of directors will meet Oct. 24 at 10 a.m. The first convention session will convene Oct. 25. Reservations are to be made through Floyd C. Larson, executive secretary-treasurer, 758 Leader Bldg., Cleveland 14. Fees are $40 for men and $25 for women and children.

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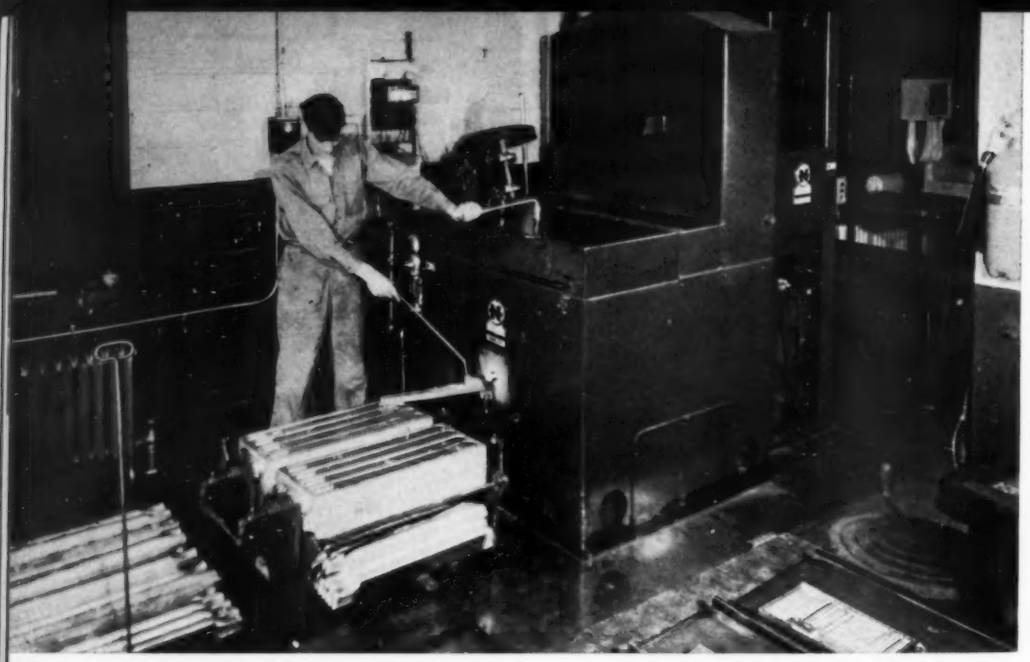


In some plants floor and wall space is not available in which to isolate the type metal remelting equipment. In this picture is shown a modern remelting department. This is a 3 T. remelting furnace with power hoist, 16 cavity water cooled ingot mold, pig dolly, power metal agitator and wall mounted temperature control.

Are You Misusing Manpower In Remelting Type Metals?

By A. F. NOLAN, *Nolan Corporation, Rome, N. Y.*

TYPE metals enter importantly into printing industry production operations. Consequently, remelting of the metal in the most economical manner is essential to the efficient operation of the plant.

A typical newspaper averaging 30 pages, for example, might require 3000 lbs. of metal daily, allowing an average of 100 lbs. of metal per page. With modern remelting equipment, this amount of metal can be collected, loaded, remelted, cleaned, poured, and redistributed in 3½ to 4 hrs. time. Unfortunately, the majority of newspapers do not operate modern remelting equipment. In these cases, more than double this time is required. A modern installation will pay for itself in less than two years from labor savings alone.

There are a number of other economies to be realized by the use of modern equipment. If the furnace is gas operated, the older burners may not be operating at top efficiency. Nearly all of the older crucibles are of cast iron construction and are subject to cracking. Even though the burner assembly may have been replaced by a new unit, it is operated under the constant hazard of permanent damage to the crucible.

Older furnaces which are electrically operated usually make use of the paddle type heater. Since this type of heater must be covered with metal and not exposed to air, roughly half the pot's capacity is unusable.

By contrast, the new type immersion heaters, such as are used in stereotype master pots and larger stereotype furnaces, permit greater use of furnace capacity. Modern design strip heaters, as used in smaller and moderate capacity furnaces, are mounted on the outside of the crucible and permit full capacity of the remelt furnace to be utilized.

Many older furnaces are not thermostatically controlled, and the furnace temperature continues to rise during operation. At temperatures higher than required for efficient remelting, tin burns off at an accelerated rate, requiring more frequent replacement of metal. Tin, one of the most valuable metals, improves the fluid characteristics of the alloy, adds to its toughness, and aids in producing a smooth face essential for sharp printing. When tin is lacking in the alloy, a reduced quality in the casting is immediately noted.

Other disadvantages of many older furnaces are the lack of safety controls—there is no safety pilot on the gas burner, no high limit controls—and no provision for emergency shutoff. Under certain conditions, furnace failure could prove disastrous. In years past, furnaces were often designed without an insulated hood and cover, thus permitting excessive heat radiation. Where an uninsulated sheet metal cover was used over the furnace, the cover acted as a radiator, carrying more heat from the furnace to the surrounding room.

Excessive heat from an uninsulated furnace slows down operator efficiency and the fumes from an open crucible add to the unpleasant working condition. By contrast, a completely enclosed, modern furnace keeps heat radiation to a minimum, and eliminates the unpleasant odor so often associated with the remelting operation.

Modern furnace technology provides a fast and controlled operation. It must be remembered, however, that the actual remelting of the metal is only one of the elements contributing to an efficient repigging department. The handling and loading of dead metal, economical operation of the furnace, testing of the metal, and its redistribution, all are important considerations.

Flagrant Manpower Misuse

Hand loading of the furnace, for example, is one of the most flagrant misuses of manpower in a printing plant. This antiquated and tedious procedure involves the extra hand effort in dumping the scrap truck in a storage bin and its subsequent loading, shovelful by shoveful into the furnace; the extra space for the scrap bin, and hours of hand labor required to perform a task which can be done mechanically in minutes. With a mechanical loader, the scrap truck is positioned directly onto the lift mechanism. With the push of a button the truck is

lifted and dumped into the pot and the empty truck is returned to the floor. Loading labor is cut better than 90%.

The casting of feeder pigs has its economies, too. If an air cooled mold is used, about a minute is required to pour the metal into the molds and several minutes to cool, depending on the temperature of the mold. When an air-cooled mold has been used repeatedly for casting pigs, 20 min. or more may be required to cool a single pig. On the other hand, a water cooled mold requires about a minute to pour each cavity and a minute to cool each cavity. Modern 16 cavity mold design (8 up and 8 down) permits almost continuous pouring. Further savings result from the use of pig dollies under the mold. The pigs are dumped directly from the mold onto the dolly to eliminate an unnecessary handling operation.

Power Agitator Provided

For still further remelting convenience and efficiency, many installations include a power agitator to provide accurate control of metal mixing. The power agitator eliminates the possibility of oxidizing the tin which would be caused by too much mixing, or metal separation in the event of too little mixing.

A metal level indicator prevents overloading the furnace or removing too much metal. This instrument eliminates the need for looking into the pot every few minutes during operation, and also prevents drawing dross into the valve.

Many installations now are provided with a time control device to shut off the furnace when not in use. Also, the control automatically turns on the heating apparatus to bring metal to the proper heat at the start of a new shift.

If a furnace is used every day, it is the practice in most plants to keep the metal in a molten state at approximately 475 deg. F. In this manner the metal is kept continuously in a liquid state and with little loss in time can be heated to temperatures required for casting. Where a furnace is used on a skip-day basis, it normally is shut off between periods of use with a time control frequently used to turn the furnace on to bring the pot to heat in advance of the pig pouring operation.

PIA Convention Plans Include Production, Technical Sessions

A PRODUCTION session, technical forum and equipment show will be included on the convention program of the Printing Industry of America for the first time this fall. The convention will be held at the Sheraton-Park Hotel, Washington, D. C., Oct. 24-29.

Management Means Business—in manpower, finance, production and sales is the theme of this, the 74th annual PIA convention. The convention will officially convene at 10 a.m. on Oct. 24 with an address concerning the printer's role in world affairs. PIA president, Walter F. McArdle will then speak to the convention. Following his address, Paul Lyle, executive vice president, Western Printing & Lithographing Co., Racine, Wis., will preview the equipment show and discuss latest technical developments in letterpress, offset-lithography and gravure.

Graphic Arts Equipment Show

The equipment show will be opened to PIA registrants at 1:30 p.m., Oct. 24. Held in the exhibit hall of the Sheraton and conducted by the Printing Industry Educational Exhibits Corp., the show is planned to highlight new developments in machinery, equipment and supplies to the Graphic Arts industries. A. E. Giegengack, president and general manager of the corporation, will direct the show. A list of the show exhibitors will be distributed to all registrants so that they may get in touch with equipment and supply industry representatives with whom they would like to have discussions about technical problems or equipment and supply needs.

The second general session of the convention, Oct. 25, at 9:30 a.m., will deal with the question: *Is More Volume the Only Answer to Printing Production?* Principal speaker of the session will be John G. Gerken, Printing Industries Assn. of Los Angeles, Calif. Session chairman will be Francis N. Ehrenberg, Blanchard Press, Inc., New York.

Various phases of production will be discussed during the production conference on Friday, Oct. 28. Chairman of this session is Grant Herman, Kable Printing Co., Mt. Morris, Ill. The session will begin at 9:30 a.m., when Willard E. Brown, Judd & Detweiler, Inc., Washington, D. C., will discuss the importance of production, emphasizing the role of production in a profitable plant.

Other topics will concern: Effective use of production facts, by Gordon Rohde, Reynolds & Reynolds Co., Dayton, O.; methods of measuring production results, by Byron W. Stinson, Thos. J. Moran's Sons, Inc., Baton Rouge, La.; ideas for improving production, by Don Sommer, PIA; case histories of management actions that have reduced production costs; when to replace equipment, by Glen C. Hyatt, Evergreen Press, Ltd., Vancouver, B. C., and identifying and evaluating costs other than the costs of new machinery when purchasing new equipment. Question and answer periods will be held during the conference.

On the last day of the convention, Oct. 29, a panel of technical experts will explore printing production problems. Headed by Edward Blank, director of production management and new developments, New York Employing Printers Assn., Inc., the panel will discuss particular problems in the major uses of gravure, letterpress, lithography, composing room and bindery.

MPS and UES Sections

Meetings of the Master Printers' Section and Union Employers' Section will take place simultaneously on Oct. 26, beginning at 9:15 a.m. The second sessions for both of these sections will begin at 9:30 a.m. on Oct. 27. The Rotary Business Forms section will meet Oct. 27. beginning with a luncheon at 12:30 p.m.

Finch, Pruyn Print Contest

A national contest based upon the best printing of Finch offset and Cooper's Cave offset stock is being sponsored by Finch, Pruyn and Co., Inc. The contest opens Oct. 1 and closes Jan. 1. Contest rule kits are available from the company's paper representatives.

In the plant of the Toledo (O) *Monitor* typists perforate tape which actuates photocomposition units for type matter production.

ONE YEAR OLD TOLEDO MONITOR PRODUCED AS A *Cold Composition Tabloid*

THE Toledo (O.) *Monitor* is a new weekly newspaper, barely one year old, published by Yakobian Enterprises, Inc., in Toledo, O. A standard tabloid format, averaging some 16 to 20 pages per issue, the *Monitor* may impress the general newspaper reader as another weekly with a somewhat stronger interest in local business affairs. The printer and publisher, however, will see in the *Monitor* a production system with emphasis upon photocomposition and offset printing which enables it to operate successfully.

George Yakobian, the publisher, is one of the growing number of printing industry leaders whose familiarity with printing technology has led them into a variety of Graphic Arts activities. In 1948 he founded the Great Lakes Engraving Corp., a trade platemaker serving a growing number of offset printers in the Toledo area. Two years later he published the Criss Cross Directory series, an annual cross indexed directory of names, telephones, and addresses in Toledo and Lucas county. During World War II Yakobian served as an editor of the Invisible Enemy Series radio program. Other side activities, stemming from long familiarity with printing production, public relations, and advertising, have led to floral exposition sponsorship, participation in starting weekly shoppers and magazines, and the dream of a great many printers—establishment of a strong weekly newspaper.

When Yakobian, now in his early 40s, conceived the idea of the *Monitor* he joined with Joseph Bernstein and David M. Drury in studying the costs involved. The usual procedure would have been to purchase regular linecasting equipment, with a complete composing room, and a letterpress pressroom as well. The sizeable capital expenditure required for a weekly automatically ruled this out. The second possibility, that of farming the job out to trade composition and trade printing plants, also had to be ruled out. This was partly because of the lack of adequate trade facilities in the area and partly because lack of control over composition would entail the risk of delay in copy preparation—a major problem in any newspaper.

Yakobian already had access to his own Great Lakes Engraving Corp. platemaking plant, and a comparison of basic total letterpress and offset costs led to the decision to go offset in the production of the newspaper.

Seated is George Yokobian, publisher of the Toledo (O.) *Monitor*. With him, left to right, are David M. Drury, editor, and Joseph J. Bernstein, general manager.

"With camera and platemaking facilities at hand, and a web offset printer with newspaper experience already located, there remained the decision regarding choice of composition method," Yakobian said. "We looked into the possibility of reproduction proofs of slug composition, and into the typewriter systems which produce a strike-on image. These were not acceptable, either because of poor typographic quality to begin with, or because of loss of detail when reproduced." We needed quality in our typographic style, and this led us to photocomposition.

"Several photocomposition systems were studied," Yakobian said. "What we needed," Yakobian went on, "was equipment which would produce straight newspaper text and tabular matter rapidly and economically. Some of the machines studied were far too encompassing with high factory hour cost—and therefore too costly for our needs. We chose the ATF Typesetter because it seemed to suit our needs."

Two ATF Typesetters were installed, with an additional keyboard unit for use during busy periods. The five machines (consisting of three keyboard and two photographic units) are maintained in one

office, together with a light table, layout table and copy files.

The keyboard units are operated by young women. Standard typewriting methods are used. The speed of keyboarding is just slightly higher than that of ordinary typing, and may average as much as 80 words a minute, depending on the operator. The keyboard unit produces a typewritten proof and a perforated tape. The typewritten proof is the typist's guide so that errors may be noted and corrections made immediately in the coded tape.

As the tape for each story is completed, it is clipped and placed in the appropriate storage box over the photographic unit for later processing. Each of these boxes contains the tapes which have the same type size and column width, so that production on the photographic unit can be continuous. These are:

1—One column, 10 pt. Baskerville roman and bold face.

2—One column, 10 pt. Baskerville roman and italic.

3—Two column, 10 pt. Baskerville roman and bold.

4—Two column, 10 pt. Baskerville, roman and italic.

5—8 pt. Baskerville, roman and italic.

6—12 pt. Baskerville, roman and italic.

7—Tabular matter, various line lengths and sizes.

8—Advertising material, miscellaneous.

Type Production Output

The two photographic units operate automatically at a speed of about 200 characters per minute, which means a production of about six lines of 12 pica, 8 pt. composition a minute. The photographic unit can produce either a film positive or a paper positive. Film positives might be used if positive plates were to be prepared, but for the *Monitor* operation all copy is produced as a paper positive. The film container within the photographic unit of the ATF Typesetter takes up to 300 in. rolls, though usually paper is developed in shorter takes in an adjacent darkroom. It accepts three different widths of sensitized paper.

Proofreading and Pasteup

Two Thermofax copies are made of the paper positive composition. One of these is used for proofreading, with the other set aside for dummy pasteup. The original paper positive is set aside to make the final pasteup for the camera.

The sheets are proof-read by the editors and then returned to the production office. In many cases, the corrections would be fairly small, consisting of single letters or words. These are usually stripped in on the original paper positive, using a file of positives from old issues. The tools employed are an ordinary razor blade, scissors, and paste pot over a light table. Where the correction involves a longer line or paragraph, the incorrect line is retyped manually while the balance of the paragraph is reproduced automatically on the keyboard unit. The new positive section is then stripped into position. Corrections in headlines can also be stripped in.

Headlines on the *Monitor* are made on a photographic display setter which produces a paper positive. Being considered now is another method of headline preparation. This consists of setting the heads on the typesetter in 14 pt., and then blowing them up as needed to 36 pt., 48 pt., or larger size.

Handling the Dummy

The advertising department prepares a rough dummy on small 5 in. by 9 in. guide sheets showing the positions of ads and available editorial space. The dummy sheets showing the positions are then roughly mapped out for editorial lead stories, and given to the layout staff.

The first dummy pasteup of editorial and advertising copy is made on rough 17½ in. by 22½ in. layout sheets, using the Thermofax tissue copy proofs. The layout sheet has black grid lines for a two page

(*Continued on Page 95*)

1—The perforated tape takes are temporarily filed in boxes for later use in these two automatic photographic units.

2—The operator is getting together a rough layout sheet in accordance with tentative dummy.

3—This two page negative spread of the tabloid *Monitor* is being opaqued.

4—Depositing the negative in the printing frame to print down on the sensitized plate.

5—Developing the printing plate. After all plates have been made for an edition of the *Monitor*, they will be transported from Toledo to an offset printer in Sandusky, O.

Offset platemaking was one of the topics for discussion at last month's Atlanta Craftsmen's convention. Panelists included, left to right: Jack Johnston, Miller & Miller, Inc., Atlanta; Albert Materazzi, Litho Chemical and Supply Co.; Moderator John Butler, vice president, John H. Harland Co., Atlanta, and Joe Self, Lithoplates, Inc., Atlanta.

Craftsmen Offset Clinics Consider Kinds of Plates and Paste Makeup

Helpful information about various kinds of lithographic plates was imparted at last month's International Craftsmen's convention held in Atlanta. In addition, another group of panelists considered paste makeup practices for offset reproduction and related their experiences based upon the methods followed in their plants.

Albert R. Materazzi, research coordinator for Litho Chemical & Supply Co., spoke on *The Widening Choice—From Paper to Copper.* In his platemaking review, he mentioned some 20-odd makes of plates together with the different types made by each manufacturer.

Wipe-on Type Plates

Among the newest plates mentioned by Materazzi are the so-called wipe-on type. These are aluminum plates to which some sort of grain structure has been imparted. The grain can be produced by dry steel brushes, by wet brushing with pumice powder, or by sandblasting. After the plates have been grained, the aluminum surface must be specially treated so it will not oxidize and will run clean on the press. The chemical treatment is also necessary when diazo coatings are used on these plates. It also can be considered a substratum for the diazo coating.

Materazzi stated that a lint-free paper applicator is used to wipe the plate with a diazo coating. The coating dries rather rapidly and is ready for exposure. All of these plates are negative-working. The trend today is to use a one-step developer and sensitizer. These types of solutions are called lacquer emulsions and actually are two solutions in one.

"The water phase," continued the speaker, "contains an acid and gum arabic and a wetting agent.

Miss Connie Stevens, Warner Brothers star, has been chosen Miss Perfect Type for the 1961 International Printing Week observance, Jan. 15-21. The event is sponsored by the International Assn. of Craftsmen.

The lacquer phase contains a lacquer resin and a solvent for this resin. They are homogenized so they do not separate. When applied to an exposed plate, the water phase removes the coating from the nonprinting areas and desensitizes the aluminum in these areas, and the lacquer phase deposits the lacquer resin on the exposed diazo image."

Wipe-on's Place in Market

Materazzi said the wipe-on plates have found a great place in the market. They are rather simple to make. They also give a somewhat longer run and more flexibility on the press than conventional presensitized plates. "It does not seem necessary that these plates be evenly coated," he observed. "Streaks which develop in the coating do not seem to be a factor in the way the plate prints."

Referring to conventional surface plates, the speaker said it is possible to produce excellent surface plates . . . which are stronger on the press and give much more flexibility than either the presensitized or the wipe-on plates.

Materazzi mentioned briefly a wipe-on plate with a base made of the same type of steel used in making tin cans. The plate is coated with ceramic enamel which is fired and then is chemically etched. The plate carries a diazo coating and is processed in the same manner as wipe-on aluminum plates. The plate has been named Ceramograph and is made by American Graded Sand Co.

The speaker discussed the longer run plates. One of the newest advancements in deep-etch platemaking was developed by Edward Stern & Co., Philadelphia. Instead of plating copper chemically on the image portions of the stainless steel plate, it is done electrolytically. The plate is wired to a battery, and the deep-etch swab used in the process is wired to another terminal of the battery. The electrolytically deposited surface is much stronger and more resistant to press wear than is chemically plated copper.

In speaking of the so-called hard metal (bi-metal and tri-metal) plates, Materazzi said they are durable and permit extremely long runs. While giving good tone reproduction they fall down to a certain extent when ordinary negatives or positives are used. To obtain best results, it is necessary that the

negatives or the positives be adjusted so the best type of tone reproduction will result.

Selecting Proper Plate

Materazzi concluded his address by advising how to select the proper plate for a particular use. He said that "too many base their decision on price, convenience and length of run. Other factors should be considered in selecting the proper type of plate. These are tone reproduction, makeready speed, press running characteristics, reproduction of solids and the length of time required to complete a job. When you weigh all these factors, remember that plate costs are the least portion of the total cost of any job."

During the question and answer period, someone wanted to know which is the best plate to use in printing gold ink in a label house. The answer was to use a hard metal face plate, usually one which has been chrome plated.

Wipe-on plates cannot be re-grained because they carry a chemical substratum. However, they can be utilized for cheaper work.

Panelist Joe Self of Lithoplates, Incorporated, Atlanta, commented on the register problem when making color plates.

A pin register system used in making the plate enables keeping control of color from the plate on through presswork. One of the pin register systems cannot be used for step and repeat work. However, in regular color work, once the register has been set up in the negative, the platemaker can check color register all the way through. If the system is used intelligently and its limitations are recognized, very good results can be obtained. Self advised using a stable base film when pin hole work is involved. He also suggested that the pins be located as wide apart as possible to minimize fanning or twisting of the film. In this instance, he was referring to a long and narrow strip of negatives.

A trade offset platemaker wanted to know if a chart is available which would enable him to determine what type of plate to select for customer work. Presently, there doesn't seem to exist an up-to-date chart for the purpose. The answer was that the trade platemaker usually groups platemaking jobs according to quality of work wanted and the length of the press run. It was suggested that the selection of a surface plate, a presensitized plate or bi-metal plate must be determined by the plant superintendent.

Pasteup for Offset

The clinic announced to consider *Paste Makeup vs. Metal Makeup,* developed into a discussion of techniques for paste makeup of forms for offset reproduction.

Edwin V. Bachorz, Western Printing & Lithographing Co., Racine, Wis., spoke about his company's experience with paste makeup. At the time of the department's

(*Continued on Page* 99)

Contest Winners at Atlanta Craftsmen's Convention

(All names read from left to right)

1—Malcolm Ward, Atlanta Club, accepts top honor in *Share Your Knowledge Review* cover contests; Fred Willis, Charlotte Club, second; Alex McDonald, Toronto Club, third. Howard N. Keefe, International publications commission chairman is at extreme right.

2—In the Craftsmen's club bulletin contest, winners were: Peter Lang, San Francisco; Fred Dent, East Bay Club; Dwight Glick, Los Angeles Club; Lee Colley, Columbus Club; Robert M. Ritterband, International bulletin committee chairman, accepts award for Honolulu Club; William Blackmore, Hamilton Club.

3—Recipients of awards in the International Printing Week poster and stamp contests were: William Pinotti receives cup for stamp contest winner, Wm. J. Salkowica, St. Paul; William Evans, new International Printing Week chairman, Charlotte Club; Robert Zeis receives cup for poster contest winner Emil Georg Sahlin, Buffalo Club.

4—Membership contest chairman Harold E. Sanger presents awards to Louis Van Hanswyck, New York Club; John R. Radziewicz, Chicago Club; John F. Leonard, Worcester County Club, and Dwiaht Glick, Los Angeles Club.

During the Craftsmen's convention in Atlanta last month, one of the numerous clinics was devoted to how to make money in composing room operation. Left to right, the speaking panelists were: Fred Duensing, Vandercook & Sons; Dr. Marvin Rogers, Flossmoor, Ill.; Daniel W. Stephenson, vice president, J. W. Ford Co., Atlanta, and Moderator Robert M. Edgar, newly-elected International president.

Big Change in Typography and Layout Now Taking Place

THREE clinics more or less specifically related to typography were held last month in Atlanta during the International Craftsmen's convention. Two of them considered the changes which are taking place in typographic uses. The third meeting was devoted to a discussion of the always difficult problem of composing room costs.

John M. Lamoureux, vice president, Warwick Typographers, Inc., St. Louis, reviewed past typographic trends and made comments on present trends. He also commented about innovations which have been introduced in *McCall's* Magazine during the past year.

"There is no question that a big change is taking place in typographic design and layout," he said. "For one thing, the creative layout artist suddenly has discovered type. In the past, most advertising layout men relegated type and typography to a secondary role while today many layout men are using type as an integral part of their design. They also use type as a graphic opportunity in itself as a medium of expression. Type is being used more and more in an illustrative sense."

Exciting Uses for Type

In referring to the current typographic trend as utilized by *McCall's*, the speaker said he did not feel it is the ultimate. He asserted that in his opinion this magazine has prostituted type and uses it for ends which he would find difficult to defend. However, he also feels the magazine has demonstrated that type can be used in interesting and exciting new ways.

Lamoureux said: "I cannot pretend to justify many of the things that are done from a purely typographical sense. However, I recognize in the publication field a terrific competition which is borne out by the demise of many . . . publications would seem to call for new and creative thinking to survive. This can be achieved without losing any of the vitality or striking arrangements achieved typographically. I cannot help but feel that the pages of *McCall's* are stimulating and will help to bring about a fresh concept in communications."

Transition in Type Usage

The main speaker at the typographic clinic was Sol Malkoff, president of Atlanta's Typography Shop. Moderator Amadeo Tomassini, manager, University of California Press, Berkeley, Calif., discussed briefly the decline in the use of general typographic design and the rise of photolettering.

Malkoff stated there were a number of reasons for the decline. In America, users of foundry type have been forced to turn to imported type faces. He said little is happening today in American type design; not too many art students are taking up courses in lettering. An additional reason, stated the speaker, is that advertisers are not always willing to pay for the better grade of the typographer's work.

Consequently, art directors and typographers are turning to phototype on acetate or paper processes. In some cases Malkoff feels that the alphabet has been aborted. Another disadvantage is the handicap of only one size type face available unless the composed type lines are photographically reduced or enlarged.

A number of manufacturers of film and/or paper type reproductions do provide good material with

At the Atlanta Craftsmen's convention last month, a panel group considered the current transition in typography. Left to right are: Dr. R. Hunter Middleton, Ludlow Typograph Co.; Sol Malkoff, Typography Shop, Atlanta; Paul Bennett, Mergenthaler Linotype Co.; Amadeo R. Tommasini, University of California Press, moderator, and Erwin Raith, Burke Dowling Adv. Agency, Atlanta.

which to work. Some excellent script types are available. A major advantage in some of the photo process fonts is the great range of set-widths in families of a given face. The new type faces for phototypesetting are based on the process rather than on the foundry basis. Critical comment was that when blown up the individual letters become distorted and spacing between them is too wide.

Dr. R. Hunter Middleton, Ludlow Typograph Co., thinks a weakness of foundry type is that it's limited with respect to modification. He also feels it is undesirable to have too much of anything. It is desirable, however, to have freedom of expression, he added. Imagination when working with fixed form alteration can work wonders.

Paul Bennett, typographer, Mergenthaler Linotype Co., is more conservative regarding freedom of expression in type design because the demand for "freedom of expression" is only a small segment of a large business. Some engineers and others associated with type layout lose appreciation of modified letter strokes, extenders and serifs. He said he couldn't get enthusiastic about it.

Control Composing Costs

Daniel W. Stephenson, vice president, the J. W. Ford Co., Atlanta, spoke on *How to Make Money in the Composing Room.* He said the making of money is achieved by control of two items. The first item is selling price and the second is cost-to-produce.

With reference to the cost-to-produce item, Stephenson said the two largest expenses are: (1) Machinery, material and equipment, and (2) Labor. In the case of foundry type, a magazine or a font of matrices, the only way this investment can be recovered is to use the equipment.

By way of illustration, Stephenson pointed out that 15 years ago four sizes of any particular type face were sufficient for machine composition. Today, however, it is necessary to have seven sizes. "If you do not apply this same multiplication factor to your selling rates you are probably in trouble, because production cost has been increased.

"Another feature is that probably you are not selling any more of this particular type face in seven sizes than you used to sell when you had only four sizes. This means also you have more down time changing molds or magazines. Who pays for this? In too many cases management pays without knowing.

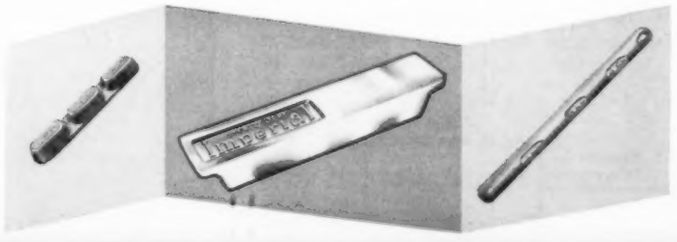
The speaker related he had seen composing rooms change to Monotype or hand set foundry type because good reproduction proofs couldn't be obtained from slugs. You can get good reproduction proofs from good slugs, he said. "It's a lot cheaper to keep metal pot pumps and mouthpieces clean, replace worn out matrices, and a few other things that might be necessary, than it is to duplicate investment.

In discussing the subject of labor with respect to composing room costs, Stephenson said that the answer to efficient operation is in supervision. The main problem is to instill the desire to produce in the men. Good supervisors treat each man as an individual, give complete instructions and, if necessary, help carry them out.

(*Continued on Page* 71)

Beyond duplication

The Colossus of Rhodes, one of the Seven Wonders of the World, cast in metal by the Greeks in 280 B. C., was beyond reproduction. In casting type metals today...Imperial type metal with Plus and Service Plans are superior in giving complete freedom from metal worries and loss of production. Write...will send details.



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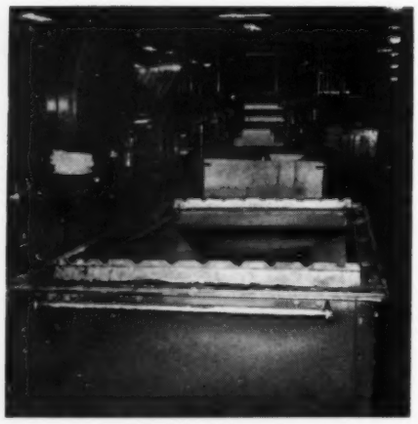
PORTABLE ROLLER WASHING TANK

The roller manufacturer in your city or supply area is aware that the pressroom of one printing plant will get considerably more mileage out of press rollers than another. The reason usually is the manner



in which they are handled on and off the press and while being cleaned.

In the pressroom of the Methodist Publishing House, Nashville, Tenn., portable tank trucks for the handling and washing of rollers are in use. One of these can be rolled alongside a press and the rollers transferred to the rack supports on each end of the tank. These notched racks actually are brass rails from junked presses. The trucks themselves were constructed in a local machine shop with most of the material supplied by the publishing house.

The fluid container consists of a sheet metal inverted four sided pyramid, with apex flatted off. A valve is mounted at the bottom to permit the roller washing fluid to drain into a can resting on the lower flat plate section of the truck. Sufficiently large casters are used so the truck can be rolled easily over a wood block floor.

The trucks at Methodist Publishing House are built to accommodate rollers up to 40 in. wide, but much shorter rollers can be handled by resting one end on a notched rack and the other on the opposite side of the fluid can.

Beside reducing damage hazards to all rollers in the washing process, these tanks keep a lot of filth off the floor and eliminate considerable fire hazard in the use of inflammable cleaning fluids.—*P. R. Russell, Staff Correspondent.*

MAKING DUPLICATE SIZE BLOCKS

There are many times when a cut must be removed from a locked form to be used in another. When this happens, it is best to have a duplicate size cut mounting block to replace the one removed.

To make a duplicate size block quickly, place the original block against the saw finger as in *B*, Fig. 1. Then place a scrap piece of stock *D*, Fig. 1, against the original block and make the saw cut. The measure may be any size.

The piece of scrap stock which has been cut, *D*, Fig. 2, can be placed against the saw finger, and

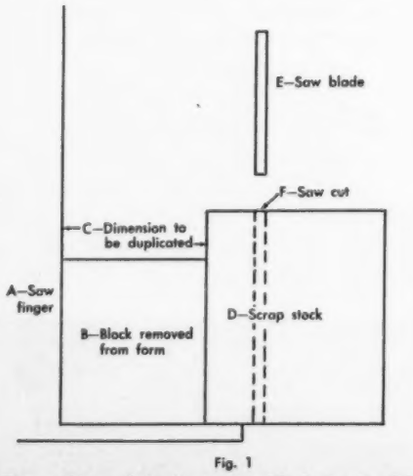


Fig. 1

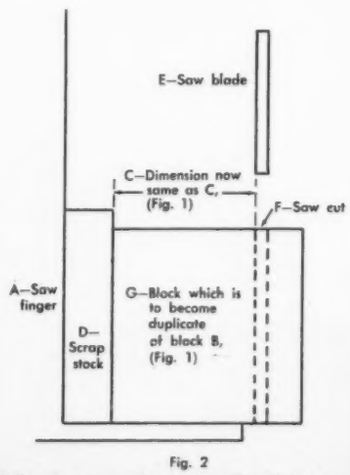

E—Saw blade
C—Dimension now same as C, (Fig. 1)
F—Saw cut
A—Saw finger
G—Block which is to become duplicate of block B, (Fig. 1)
D—Scrap stock

Fig. 2

The making of duplicate size blocks is simplified by following procedures described in story.

For the Reader

A chance to be paid for ideas which have netted savings in time, money and effort in your printing plant is offered readers of *Printing Production*. If your idea is accepted for publication it will be printed in the Idea File, a regular *Printing Production* feature, and a check will be mailed to you.

Send as many as you wish to: Idea File Editor, *Printing Production*, 1276 W. 3rd St., Cleveland 13, O.

a piece of stock *G*, Fig. 2, which is to become the duplicate is placed against the scrap stock and the cut made by the saw. The measure should not be changed. The resulting dimension *C*, Fig. 2, is the same as the original dimension *C*, Fig. 1.

Then turn the original block *B*, Fig. 1, and repeat the operation to set up the other dimension. When the operation is complete, you will have an exact duplicate of the block which will lock up and hold perfectly.

Adding a small nail to the center of the block will make it easy to pull the block from the form. The nail should be driven into the block below type high to prevent its printing.—*W. R. Lovelace, Minneapolis, Minn.*

ONE SPACING MATERIAL RACK FOR TWO LUDLOW OPERATORS

During our plant expansion some time ago, we added a matrix cabinet to our Ludlow installation. Due to our cramped working quarters, addition of the cabinet created a serious problem. Proximity of the cabinets to the casting machine prohibited using the spacing material drawers. We also tried storing all spacing material atop one of the cabinets, but this arrangement didn't work either. Two operators working at the Ludlow constantly interfered with each other when reaching for spacing material.

To solve the problem, we planned and built a spacing material rack

which was mounted above and at the rear of the machine as shown in the picture. The rack extends fully across the cabinets and the casting machine.—*Joseph L. Gagne*, Foster's Daily Democrat, *Dover, N. H.*

POROUS HAND MADE THIN PAPERS SLIPSHEETED TO RUN THRU PRESS

Recently we printed a job on two kinds of Japanese hand made papers which were very porous and seemed to be thinner than French folio. We tried printing these sheets on three different presses—Miehle Vertical, ATF Kelly C and an offset press.

None of the feeders would take the sheets. The idea of slip sheeting with 50 lb. coated stock was finally tried. It worked like a charm.

The job called for 25,000 impressions on each of two kinds of stock. We averaged about 2500 i.p.h.

Of course, the slip sheeting ran the price up considerably. We tried slip sheeting with cheap manilla and bond stock, but they proved difficult to run due to the roughness of the hand made papers. The stock trade names of the papers were Troya and Unrya.—*Harry A. Schionning, pressman, South Plainfield, N. J.*

HAND SYRINGES DAMPENERS

On our offset presses we use a small hand syringe to add extra water to the dampener rollers. We use it instead of a sponge. This method keeps our hands out of the dampening solution which at times caused skin irritation.—*Martin E. Odell, pressman, Gospel Trumpet Co., Anderson, Ind.*

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THE DAILY NEWS-TRIBUNE
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WATERBURY AMERICAN
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MR. CHESTER ROSENE, Composing Room Foreman, Santa Monica Outlook, Santa Monica, California

"Here at the Santa Monica Outlook we use the Carlson Finisher in our composing room to widen inside mortises and remove metal from casts finished in stereotype. It helps both composing and stereotyping. It saves time for both departments. The printers save hours formerly spent filing each week because the vertical cut eliminates the need for files. This is a fine production machine."

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For More Information Circle 33 on Reader Service Card

Engravers Meet in Buffalo

THE value of the printed word, new techniques and equipment for photoengravers and costs will be studied during the 64th annual convention of the American Photoengravers Assn., Statler Hilton Hotel, Buffalo, N. Y., Oct. 10-12.

The value of printed advertising vs. the value of broadcasted advertising is the general theme of the convention which opens at 9:30 a.m., Oct. 10. Former Governor Arthur B. Langlie, president of McCall Corporation, will address the first session on the value of the printed word. Additional topics to be covered during the first session include magazine reproductions and advertising.

Wrap-around Letterpress Panel

Our First Year in the Field of Wrap-Around is the theme of the panel discussion scheduled for the morning of Oct. 11. Panel members are: Charles E. Wortman, product manager, wrap-around letterpress, Harris-Seybold Co., Div. of Harris-Intertype Corp.; Charles C. Harris, manager of Harris's wrap-around technical center; and E. W. Thomas, vice president, Speaker-Hines & Thomas, Lansing, Mich.

Previous to the panel discussion, new areas in masking copy, the new masking technique called Multimask and photographic derivatives will be reviewed. Also, Joseph Chanko, general manager, Conde Nast Press, Greenwich, Conn., will talk on progress in photoengraving.

A report on accomplishments in photoengraving research will be made by Marvin C. Rogers, executive director, Photoengravers Research, Inc., during the afternoon session, Oct. 11. *Practical Use of Color Scanning in Photoengraving* will be the topic of a panel discussion, also, to be held during this session. Panel moderator will be Russ Daley, superintendent, engraving department, R. R. Donnelley & Sons Co., Chicago.

Practical Advances in the Per Copper Process is the subject to be discussed by Donald B. Alnutt, director, Graphic Arts Research, Philip A. Hunt Co.; and Wilfrid T. Connel, president International Photoengravers Union of North America, will talk on the *Wheel Horse* during the afternoon session, Oct. 11.

During a luncheon meeting on Oct. 12, an illustrated presentation on *Managing for Profit*, prepared by the Photoengravers, will be given. Preceding the luncheon, talks will be heard on the Hell Klischograph, cost accounting for tomorrow, advances in color proofing, control as it is related to profits and replacing outdated equipment.

In addition to the regularly scheduled sessions, a machinery exhibition will be held throughout the convention. Association officers are: E. B. Brooks, president; H. E. Collins, first vice president; S. H. Hitch, second vice president, and W. K. James, secretary-treasurer.

At left is E. Barlett Brooks, 1959-60 president, American Photoengravers Assn. Harry E. Collins, first vice president of the association, is seen at right.

WHAT'S AHEAD FOR THE READER

Next month you will be able to read an exclusive story on an American's impression of the printing industries of Great Britain and France. *Printing Production's* editor, Edward H. Owen, last month traveled 8000 miles, interviewed scores of Graphic Arts executives and workers, and documented his trip in an interesting report to be published in the October issue. If you are interested in what is happening in your industry in other countries, read *Printing Production*.

Photoengraving will be featured in several informative articles of the next issue. One of these will bring the reader up-to-date on late developments in powderless etching of copper plates. Union acceptance and its program in the area of photoengraving research is the subject of another story. Finally, read the second installment of the *Pleasing Color* series on methods of achieving highly acceptable color reproduction.

Don't miss next month's concluding part of the survey on *The Production Future of the Weekly Newspaper*. The author presents evidence that some weeklies are deserting the traditional letterpress process in favor of web offset printing. This is high priority reading for those who are concerned with the weekly field.

Also look for other regular features: the Idea File, report on Research Activities, announcements of New Equipment and Supplies, and the Washington report on Patents for the Printing Industry.

Scheid Appointed to Head Graphic Arts at Carnegie

Kenneth G. Scheid has been named head of the newly established Department of the Graphic Arts in the College of Fine Arts, Carnegie Institute of Technology, Pittsburgh. The announcement was made by Dr. J. C. Warner, president, Carnegie.

Prior to his appointment, Scheid was associated with the University of Pennsylvania. He has also served as industrial relations manager for Forbes Lithograph Mfg. Co. and as coordinator of Graphic Arts courses at Boston University. A frequent contributor to Graphic Arts journals, Scheid is a member of the Education Council of the Graphic Arts Industry, and the Education Commission of the Lithographic Technical Foundation.

The new department which Scheid heads at Carnegie was developed last January and is designed to provide complete courses in Graphic Arts design and Graphic Arts management. The department will replace the School of Printing Management which was discontinued in 1959.

Kodak announces

2 important new emulsions for the graphic arts

Both on Estar Base

KODALITH CONTACT FILM (ESTAR BASE) is the new film that lets you operate your contact room in near roomlight for easy registering.

It's blue sensitive. Permits easier-to-work-under yellow safelights. No need for blue-filtered light when exposing.

This new film is easier and cheaper to process, too, because of its high safelight tolerance. You can use less expensive single-solution Kodak D-11 Developer, which has longest tray life. It will give you optimum results.

Kodalith Contact Film is high contrast, lets you obtain precise dot-for-dot reproduction over a wide range of exposures and development. Lets you produce excellent tints from a master screen tint. And this film can be dot etched using standard solutions. What's more, dots stay hard.

Your Kodak Technical Representative will demonstrate if you ask him to. But try this new contact film soon.

KODALITH ROYAL ORTHO FILM (ESTAR BASE) is a new fast emulsion for color work—halftone negatives and positives.

Its big news is in its speed and the dots you can produce with it. This film is four to five times faster than Kodalith Ortho Type 3, yet has the same wide development latitude.

Dots you'll get with this film are hard—hard all the way through. Dots that can be etched drastically to a pinpoint without graying out. No other film we know of will take dot etching like this one will.

And working Royal Ortho through the repeated wetting and drying of dot etching gives you no register problems. Its 7-mil Estar Base holds its size.

Use it where only premium quality will give you the results you want, where only the very best will do. Your Kodak dealer has it now (also available on plates).

ESTAR BASE: Kodak's own polyester support—size-holding, flat-lying, flexible, optically clear, kink-resistant—with built-in anti-Newton-ring properties. Moisture-resistant, rapid drying Estar Base will not be affected by the repeated wetting and drying of dot etching. Your Kodak dealer now has all the films pictured. Use them when you want performance to live up to your expectations.

Graphic Reproduction Sales Division **EASTMAN KODAK COMPANY,** Rochester 4, N.Y.

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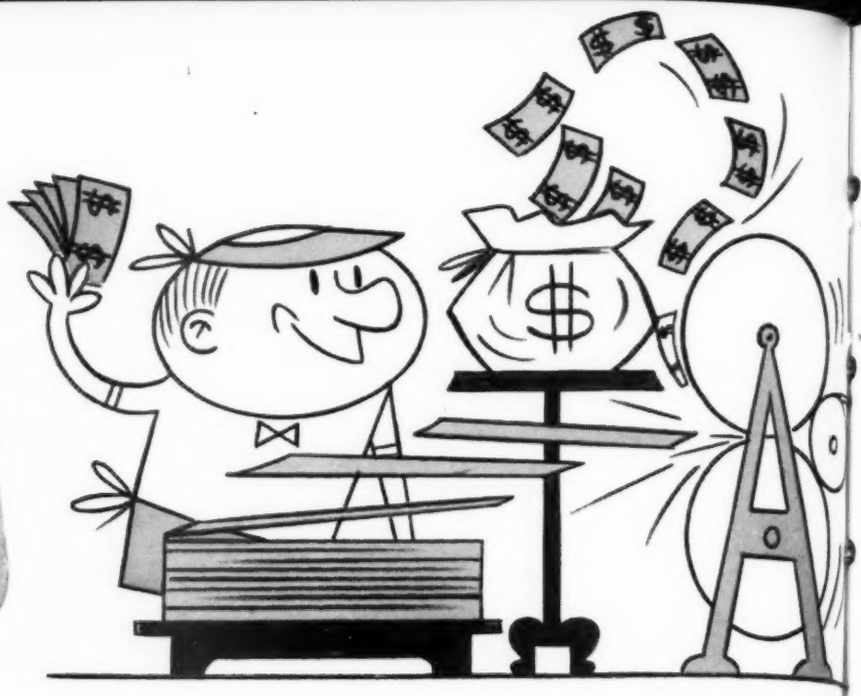

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Are you printing it? Or having it printed? Printer or publisher, or buyer of quantity printing, your aims are the same. You want a quality job and you don't want to pay the world for it.

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Great Northern groundwood is adaptable and economical — two good reasons why it's being used in greater and greater volume in major offset, gravure and letterpress plants throughout the country.

Groundfloor Facts about Great Northern's Groundwood Papers

Custom-made. All GNP Groundwood Papers are made to your order, the way you want them.

Custom-finished. English, Machine, Antique, Eggshell, Bulking — or in between — there's the right finish for your job.

Choice of weights. Basis weights (25 x 38 sheet) range from 33 to 55 lbs.

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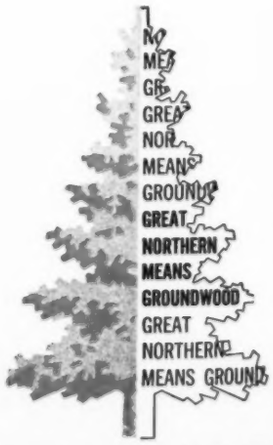

The company that thinks ahead . . . does the best job today

Change in Typography

(Continued from Page 65)

O. F. Duensing of Vandercook & Sons, Inc., spoke of composing room costs with respect to the equipment used. He said: "No matter how capable or how experienced the men may be, their skill is not enough to perform their particular jobs at maximum efficiency. What they also need is the right tools with which to work.

"Some plants are operating with insufficient equipment, or equipment so old it actually adds to the inefficiency of a plant rather than make it more productive. In many of these plants they are actually paying for new equipment through overtime in order to maintain production."

Review Composing Costs

Marvin C. Rogers presented a brief review of items which contribute to excessive composing room costs. Many cost elements are taken for granted because they are of a historic nature. First, he mentioned the quality of copy coming into the composing room. He referred especially to copy which is to be photoset, corrections for which cannot be made as readily as for hot metal composition. The key to effective production consists of men and machines. Factors contributing to high costs are caused by carelessness of the operator striking the wrong key, or defective product. Errors in TTS composition primarily are made in the machine.

The speaker said it is not good business in cases where the editor or author depends upon the composing room to correct his mistakes. Copy instructions and layout should be complete. Phototypesetting brings out desirability for complete instructions with copy. The compositor's mind is on routine production—not on planning the job. Rogers stressed clean copy, good matrices and well maintained machinery.

He concluded his address by commenting upon proper premakeready and justification of the form with special reference to discarding wood as mounting base for cuts. The end result, of course, will be reduced press makeready time.

PRINTING PRODUCTION's OVERSEAS' REPORT

Survey Unearths French Printing Woes

Outdated machinery, high costs and scattered, small printing establishments characterize the French printing industry, according to a recent French survey.

Of the 7000 printing establishments in France, approximately 50% are located in the Paris region. Most of the shops are small with 90% or 6300 of them employing fewer than 10 workers. Approximately 2000 or 28.5% of the total are one-man operations which are primarily retailers of stationery supplies but which do leaflet and card printing on the side.

Of the remaining French print shops, 8.5% or 595 employ 11 to 50 men; 1.5% or 105 employ 51 to 100; and 10 or 0.014% employ 101 to 500. A total of 80,000 workers are employed in the French printing industry.

Most machinery used by French printers is outdated causing high production costs, inferior quality and slow production speed. According to the survey, 70% of French equipment is 20 years old or older and 40% is at least 30 years old.

It is pointed out in the survey that countries surrounding France which print in the French language such as Belgium and Switzerland are equipped with more modern facilities. The oncoming Common Market in Europe may make it imperative for French printers to revamp and modernize their industry.

⊙ ⊙ ⊙

The governments of Italy and West Germany have announced signing agreements to export printing machinery to the Soviet Union. The Italian - Russian agreement covers machinery costing $733.5 thousand.

⊙ ⊙ ⊙

A recent report from Italy states that the trend in its Graphic Arts industries in recent years has been toward large establishments capable of producing large orders. This trend reportedly has resulted in machines in a price range that are more competitive in export markets, particularly in the area of medium size equipment. The main export item of the Italian industry is the platen press. Single color rotary presses are the number two export.

Though it has not kept pace with the export of Italian machinery, printing from Italy also has been gaining ground on the world export market in recent years. The Italian industry consists of 6000 establishments. Of this total, 4800 employ less than 10 people; 800 employ 10 to 50; 100 employ 50 to 100, and 60 employ more than 100.

LPNA Fights Low Duty on Cuban Litho Imports

A duty preference of 20% granted to lithographic imports from Cuba was recently assailed by the Lithographers and Printers National Assn. Pleading the case of the association before the U. S. Tariff Commission and the Committee for Reciprocity Information in Washington, D. C., was Oscar Whitehouse, executive director.

In essence, Whitehouse protested the continuance of the preferential duty because it fosters the Cuban revolutionary regime which is considered anti-American. Included in the favored litho imports from Cuba are cigar box labels and wraps and cigar bands.

Whitehouse also warned of the peril of seizure of U. S. lithographic investments in Cuba.

NEXT MONTH: Look for another PRINTING PRODUCTION exclusive—a first-hand report by Editor Edward H. Owen on the printing industries of Great Britain and France. Last month the editor of this magazine traveled more than 8000 miles to bring you the story of what printers of these countries are doing, their current problems, and what they think about the future of their industry. You will find his story highly informative and entertaining.

ITCA Prepares for Dallas Convention

Plans for the 41st annual convention of the International Typographic Composition Assn. to be held Oct. 19-22 at the Statler-Hilton Hotel, Dallas, have been announced. Important speakers, various panels and forum discussions are scheduled for the convention.

Sessions are to begin Thursday morning (Oct. 20) with additional meetings in the afternoon. Other sessions will be held Friday morning.

Pertinent topics which will be covered by speakers are: Methods and responsibility; human relations, and cost and financial problems. Among the speakers who will present papers at the convention are: Cyril Wildes, Industry Div., U. S. Bureau of the Census, who will present an analysis of the typographic industry. Technological changes which have taken place within the composition industry will be considered by Charles V. Edwards, Commerce Clearing House, Inc., Chicago.

Applications of quality control to typographic operations is to be explained by Glenn E. Owens, quality control administrator, Convair Corporation, Dallas.

Seminars are to be held on Friday morning for review and study of papers which have been presented. Trips have been arranged for the afternoon at Dallas trade composition plants of Jaggars-Chiles-Stovall, Inc., and John A. Scott & Co.

Dealers to Discuss Plans For National Organization

Plans for the formation of a national organization of Graphic Arts equipment and supply dealers will be discussed at a meeting at the Sheraton Park Hotel, Washington, D. C., Oct. 25. The meeting will take place during the annual convention of the Printing Industry of America.

Chairman of the committee which has planned the meeting is Frank F. Pfeiffer, president of Reynolds and Reynolds Co., Dayton, O. Those interested in attending should make reservations through: Printing Industry of America, 5728 Connecticut, N.W., Washington 15, D. C.

Composing Room Apprentice Honored—Patrick J. Harrington, right, composing room apprentice, has been named the outstanding apprentice of the Washington, D. C., area. Employed by Mercury Press, Washington, D. C., Harrington receives the Bridges-Randolph Award of the D. C. Apprenticeship Council from James W. Shield, Judd and Detweiler, Inc., Washington.

RIT Reprints Rogers Series

A series of articles dealing with the status of Graphic Arts research by Dr. Marvin C. Rogers has been reprinted by the Graphic Arts Research Dept. of Rochester Institute of Technology. Dr. Rogers is the director of the Photoengravers' Research Institute.

Six articles comprise the series which originally appeared in PRINTING PRODUCTION, Sept. 1959-Feb. 1960. In each article, Rogers discusses a different aspect of Graphic Arts research—the shortcomings and the accomplishments of research in the U. S. and abroad. He endeavors to suggest programs that he feels the Graphic Arts industry must adopt for survival.

Copies are available from: Graphic Arts Research Dept., College of Graphic Arts, Rochester Institute of Technology, Rochester 8, N. Y.

Craftsmen Record Printing's Progress

Roswell E. Fisher, author of the final chapter in *Printing Progress—A Mid-Century Report*, a commemorative volume published by the International Assn. of Printing House Craftsmen, has forecast a glowing future for the printing industry. Expanding population, increased leisure time and increased wealth, he says, will make the printing industry more important.

Although touching upon the future, the book is not intended to be a forecast of tomorrow's conditions nor is it a historical treatise. It is rather a comprehensive report on the condition of the printing industry from a technological standpoint. Its purpose is to contrast the printing industry of 1900 with the industry at mid-century.

Attributing the progress in printing to two causes—craftsmanship and research—the authors of the book very ably span the roles the two factors have played in the past 50 years. The influences and effects of these causes from their beginning to the present emphasis on specialization are discussed.

Among those that deserve special credit for the commemorative book are A. R. Tommasini who recommended in 1955 the publication of such a volume.

Howard N. King, general chairman, was responsible for the coordination of the publication—a monumental task since many different authors participated in the book.

The editor of the book, Clifford L. Helbert, worked with nearly 50 writers of the different chapters. His preface and summary help the reader understand the book's contents in a most skillful manner.

J. Homer Winkler is given credit for guiding the comprehensive purpose of the book; while production and distribution were the responsibility of A. E. Giegengack.

The book is an outstanding example of typographic design and printed with liberal use of color. A representative sampling of its contents includes chapters on: Research in the Graphic Arts; Paper and Graphic Arts; Processing the Printed Sheets; Specialized Processes and Applications in the Graphic Arts, and Packaging-Design and Printing.

Printing Progress—A Mid-Century Report was printed in an edition of 10,000 of which a few hundred copies remain. These are to be sold at $10 each, as long as the supply lasts. Orders may be sent to A. E. Giegengack, 5728 Connecticut Ave. N.W., Washington 15, D. C.

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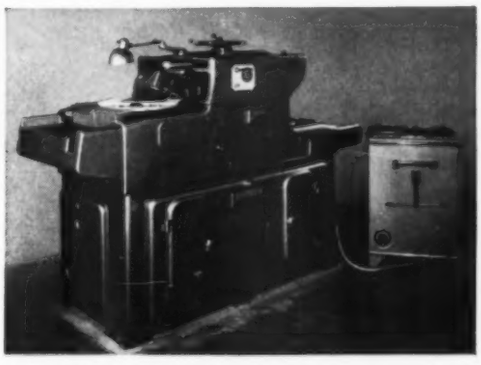

K-181 VARIO-KLISCHOGRAPH enlarges or reduces, screens, color-separates, color-corrects and engraves in one operation. Reproduces reflection copy or halftones up to 133 screen; also line work, color or black and white. Simple controls for changing dot size and contrast. Maximum plate size: 12" x 16¾". Choice of four interchangeable screens from: 65, 75, 80, 100, 120, 133.

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East Coast: Ernest Payne Corporation, New York/*Philadelphia:* Foster Type, Philadelphia, Pa./ *Washington, Baltimore, and Charlotte, N. C.:* George R. Keller, Inc., Washington, D.C./*Georgia:* Southeastern Printers Supply Corporation, Atlanta, Ga./*Middle West:* Printing Equipment Division, Automatic Saw Company, Indianapolis, Indiana./*Southwest:* Klischograph Southwest, Dublin, Texas./*Denver:* A. E. Heinsohn Printing Machinery & Supplies, Denver, Colo./*West Coast:* Graphic Arts Equipment & Supply Company, Los Angeles, San Francisco, Seattle, and Portland.

For More Information Circle 85 on Reader Service Card

EQUIPMENT AND SUPPLIES

You may easily and quickly obtain additional information on the new equipment, supplies and services mentioned on these pages by completing the special Reader Service Card conveniently found in this issue.

GRAPHIC PRODUCTS' STABBER FOR CONTROLLED PRESS MAKEREADY

The press makeready stabber developed by Graphic Products is an attempt to make standardization possible in the use of the tool by pressmen. Speaking generally, a variety of stabbers are used. These consist of knives of various kinds, ice picks, punches, chisels and nails.

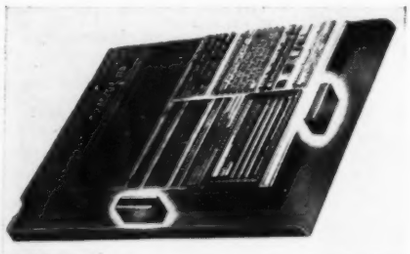
In some instances, impression cylinders have been damaged through injudicious force of the blow with which the selected stabber has been struck. Such damage, it may be said, is rare.

Most pressmen have preference for a certain type of stabber with which they have learned to do excellent work. However, there has existed no tool specially designed for general use with which the makeready sheet can be stabbed to an automatically controlled depth and to permit returning the madeready sheet in the exact position on the cylinder from which it was removed.

The Graphic Products stabber carries a 7/32 in. circular cutting die on one end. The die itself projects from the shank approximately 0.045 in. Overall length of the 3/8 in. diam. stabber is 3 in. for convenience while carrying in a pocket. The die is made from heat treated impact steel alloy. Circle No. 280 on Reader Service Card.

MAGNET-LOCK MAGNETS HOLD FORM ON GALLEY WHILE PROOFING

Magnet-Lock magnets for holding hand or machine set type forms securely in a galley have been made available by Foster Manufacturing Co. Manufactured in the

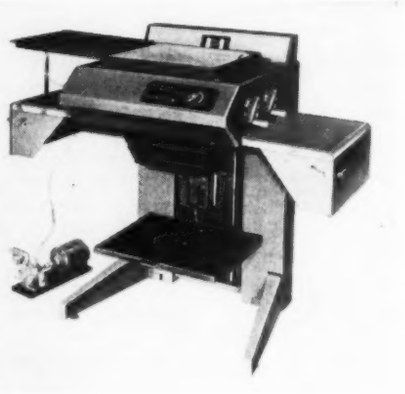


U.S., the magnets are claimed to be strong enough to hold a full newspaper form securely for more than 100 reproduction proofs without other sustaining means. They are removed from the galley by placing a second magnet in reverse on top of the one in use, thus interrupting the magnetic field. Circle No. 270 on Reader Service Card.

RESTYLED ROBERTSON METEORITE CAMERA

Robertson Photo-Mechanix, Inc., has released details concerning the restyling of its Meteorite Camera. To be known as the MK-1A, the camera is constructed with the same film and copyboard capacity and enlargement-reduction ratios as its predecessor.

The changes include a restyled top utilizing steel instead of wood. Sharp corners have been eliminated. Legs and lamp housings have been redesigned in accordance with industrial design practices and the overall height of the camera has been lowered by 1 in. Circle No. 269 on Reader Service Card.



ONE UNIT CONVERTS TWO COLOR OFFSET PRESS TO FOUR COLOR

Amsterdam Continental Types and Graphic Equipment Inc., has been named distributor for the Kolibri sheetfed multicolor offset press which can be converted from a two color to a four color press.

The Kolibri, a West German product, is available as a basic two color press which may be adapted to four color work by connecting an additional two color unit at any time. In four color work, it is said, sheets are transferred to the second unit by means of a transfer cylinder which maintains register.

The basic two color press is equipped with an automatic stream feeder and is furnished with two printing units arranged around a common impression cylinder.

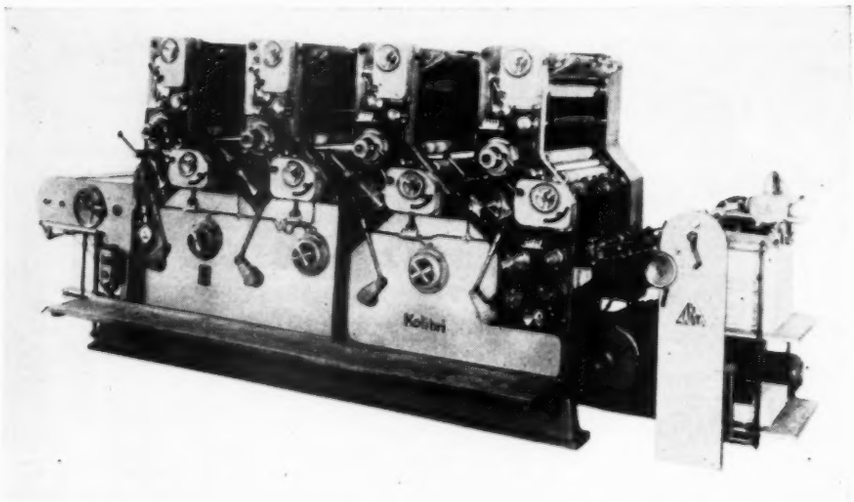
Three models are available in sheet sizes of: 17½ in. by 22½ in.; 20 in. by 25 in.; 23 in. by 30 in. Minimum sheet sizes are, respectively: 10 in. by 12 in.; 11 in. by 15 in.; 15 in. by 20 in. Maximum speed of the three models is claimed to be 8000 sheets per hr.

Other features of the press consist of swing grippers, an infeed cylinder which acts as a preimpression cylinder to stretch the sheet prior to printing and as a transfer cylinder on four color work, oversize impression cylinder, 15 roller inking system, automatic idling system, and chain delivery. Circle No. 273 on Reader Service Card.

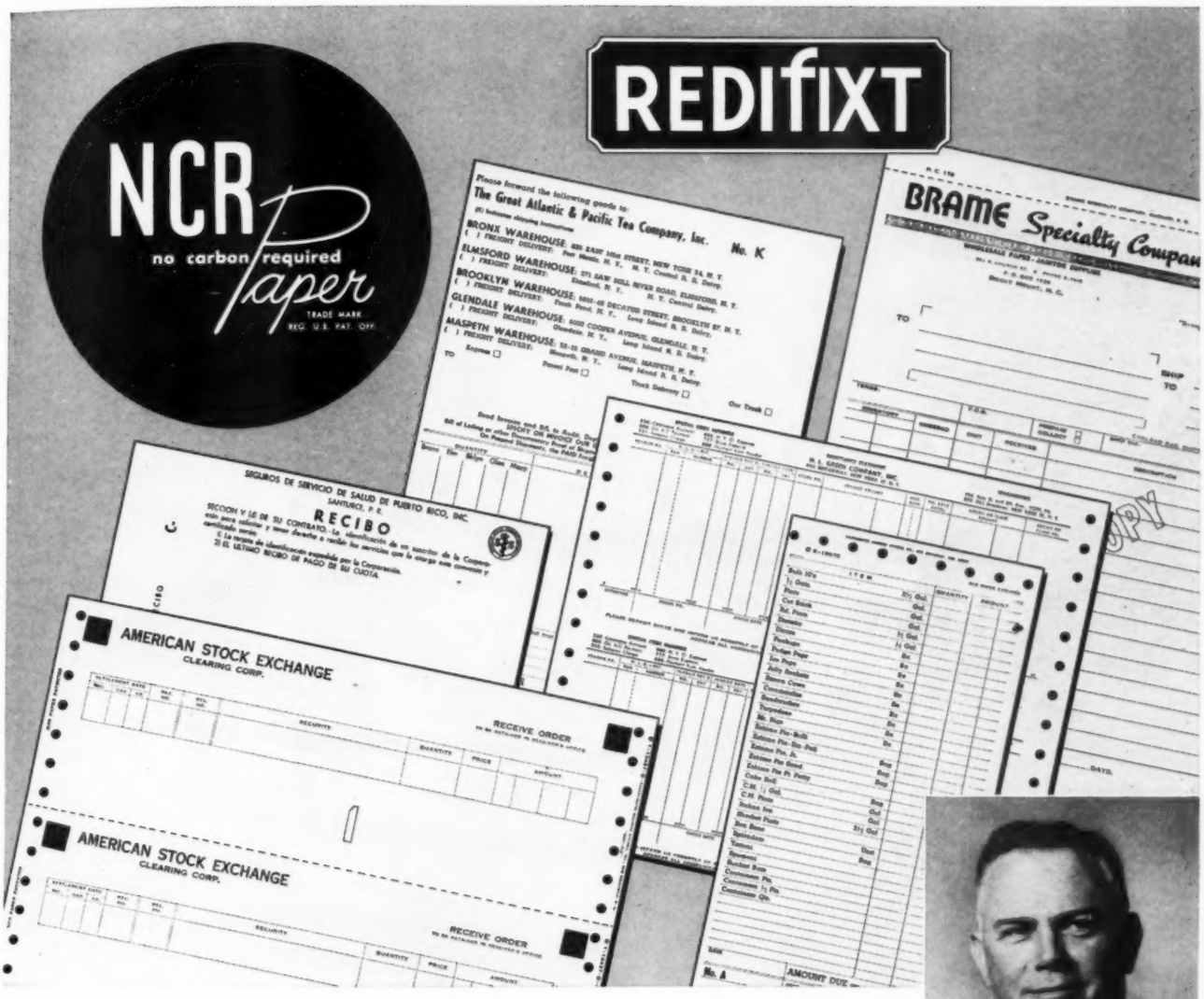
FIVE GRAPHIC ARTS FILMS ADDED TO KODAK'S ESTAR BASE SERIES

Five Graphic Arts films—additions to the Estar Base series—have been announced by the Eastman Kodak Co. They are: Kodalith Ortho Matte Film, Type 3, Estar Base; Kodalith Ortho Film, Type 3, Estar Thick Base; Kodalith Pan Film, Estar Base; Kodak Pan Masking Film, Estar Base, and Kodak Autopositive Film, Estar Base.

According to the sponsor, Kodalith Ortho Matte Film, Type 3, Estar Base has a wide development and exposure latitude and is designed for producing line or halftone negatives. Coated with the Kodalith Ortho Type 3 emulsion, the film has a matte surface on both sides for

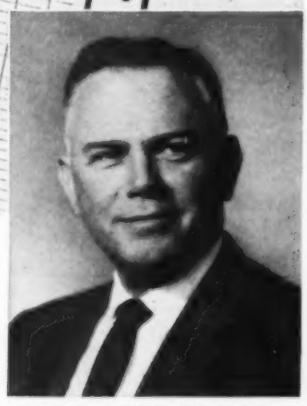


Kolibri offset press can be converted into a four color press with additional two color unit.



"NCR PAPER increased our forms volume 35% in two years."

—CONSOLIDATED BUSINESS SYSTEMS, INC., New Brunswick, N. J.



J. W. PIERCE, President of Consolidated Business Systems, Inc.

"We recommend NCR Paper as the answer to industry's pressing need for business forms that provide increased efficiency. NCR Paper reduces waste and extra handling in record keeping and paper work. Moreover, its versatility for new applications seems unlimited.

"NCR Paper has simplified our manufacturing problems while providing satisfied customers with greater speed and economy in their operations. We feel NCR Paper will soon replace a major portion of today's established carbon interleaved business.

"Customers' enthusiastic acceptance of NCR Paper has increased our sales of Redifixt Business Forms more than 35% in the last two years. An extremely high percentage of repeat orders for NCR Paper enables us to reduce our selling costs and still increase our profits. We anticipate continued increases in our sales of NCR Paper."

President
Consolidated Business Systems, Inc.

NCR Paper's market for business forms is tremendous! Investigate today. NCR Paper is available in sheet stock at local paper suppliers in bond, ledger and tag grades. For roll stock, write to: The National Cash Register Company, Dayton 9, Ohio

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NCR PAPER ELIMINATES CARBON PAPER

For More Information Circle 208 on Reader Service Card

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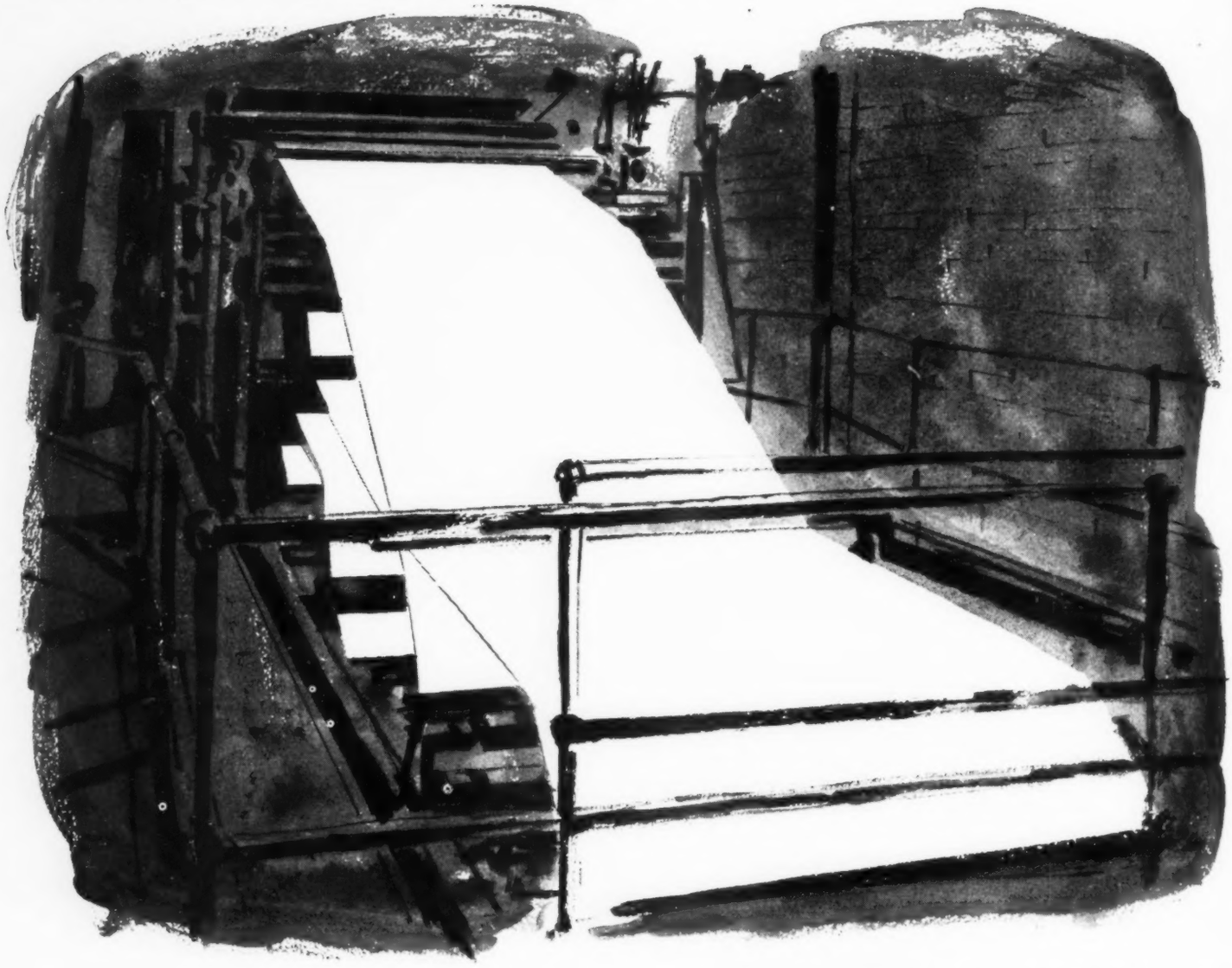
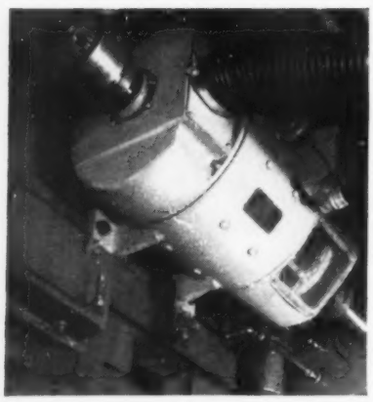


Let's Talk Press Drive FLEXIBILITY



G-E KINAMATIC® d-c motors mounted at each *San Francisco Chronicle* press unit provide all the power you need, whenever you call for it.

COMPACT CONTROL ROOM at the *Philadelphia Bulletin* contains all the G-E control, rectifier, and power-distribution equipment for 72 press units and 14 folders.

Flexibility is one of your most important requirements. As a newspaper production manager, you must have complete freedom concerning which units are operated with which folders. Such flexibility enables you to quickly and efficiently set up and produce a paper, regardless of size fluctuations between editions.

YOUR GENERAL ELECTRIC DC DRIVE SYSTEM takes such orders in stride. The G-E system enables you to "transfer" drives from press to press whenever your requirements change—or whenever press trouble develops. You simply throw a switch for each unit or folder involved. This switch connects everything associated with the drives—motors, dynamic braking, push buttons, press accessories, press lights—even the reel-tension and paster equipments, if you like.

BUILT-IN CAPABILITIES FOR EXPANSION add to the flexibility of your G-E drive system. As your presses grow in size, it is easy and inexpensive to add drive capacity. All you need is a motor, a selector switch, and accessories for each new unit. No costly, additional control-room equipment is required.

CALL YOUR LOCAL GENERAL ELECTRIC Apparatus Sales Office for more information about the G-E press drive. And write for Bulletin GET-2504, Section 653-54, General Electric Co., Schenectady 5, N. Y.

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For More Information Circle 68 on Reader Service Card

additions of pencil or ink lines. The film is recommended for photolithography and for drawing reproduction and map work. The 0.004 in. polyester support is said to provide the dimensional stability and toughness required for these Graphic Arts uses.

Kodalith Ortho Film, Type 3, Estar Thick Base combines Kodalith Ortho Film, Type 3, with a 0.007 in. polyester support which is claimed to provide dimensional stability in a flexible film.

A high contrast panchromatic emulsion on 0.004 in. polyester support are features of Kodalith Pan Film, Estar Base. Direct screen halftone negatives from color originals may be made with use of this film. The film is recommended for use wherever a red filter is required for exposure.

Kodak Pan Masking Film Estar Base, is designed for camera-back masking of reflection color copy. The material is on a 0.007 in. polyester support. It is unbacked film for exposure through the base and for an unsharp mask. The emulsion characteristics are said to be identical to Kodak Pan Masking and Kodak Pan Masking P. B. film.

It is stated by the sponsor that Kodak Autopositive Film, Estar Base, is designed to produce a negative from a negative, or a positive from a positive with a single exposure and development. Recommended for use where size holding is critical, this film is designed for making duplicate line or halftone negatives or positives with or without lateral reversal. With this film, it is also said to be possible to obtain an image which is either negative or positive or a combination image that is part negative and part positive. Sponsor claims that this selectivity means that step-and-repeat work, lateral reversals, combinations of type and reverse type, and combinations of line work, tints, and halftones can be accomplished on one piece of film with the proper sequence of exposures.

SCREEN PROCESS PRINTING UNIT CONSISTS OF PRESS, DRIER, STACKER

An announcement has been made by Printing Aids Corp. of a screen process printing unit which can be operated by one man. The unit is said to do away with drying and sheet handling.

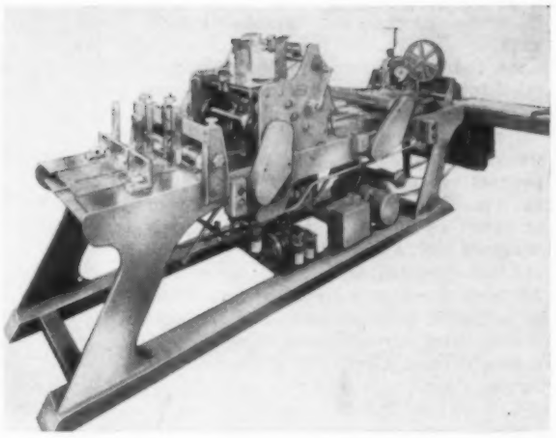
According to the manufacturer, the complete screen process printing unit successfully combines press, drier and stacker into one unit, driven by one motor. The flatbed press prints either pliable or rigid sheets of any thickness on material such as paper, plastic, cardboard, metal, plywood, composition boards, etc., and will handle any size under its maximum capacity. The unit is available in a number of sizes ranging from 22 in. by 28 in. to 44 in. by 64 in. and can be operated, according to the manufacturer, at any speed up to 1000 per hr.

The printed sheets are automatically removed from the press and inserted into a high velocity controlled air drier designed to dry the ink without affecting the sheets. When dry, sheets are automatically removed and stacked on skids right side up adjacent to the operator.

Drying and stacking components are independent and modular in construction, and may be added to any press currently in the field. Floor space needed by the equipment is 250 sq. ft. Circle No. 263 on Reader Service Card.

FLUORESCENT SCREEN PROCESS COLORS

Two fluorescent color lines for screen process printing are being marketed by Advance Process Supply Co. The Lumi-Glo line consists of fluorescent opaque poster colors while the Strike line consists of opaque textile inks. These inks are available in nine colors. Circle No. 303 on Reader Service Card.



The Magnacraft 60-D mailing machine is equipped with dual feeding hoppers and a dual purpose labeling head. According to the sponsor, the feeder may be used for labeling envelopes, postcards, newspapers and magazines. Standard and electronic type labels are handled by the machine.

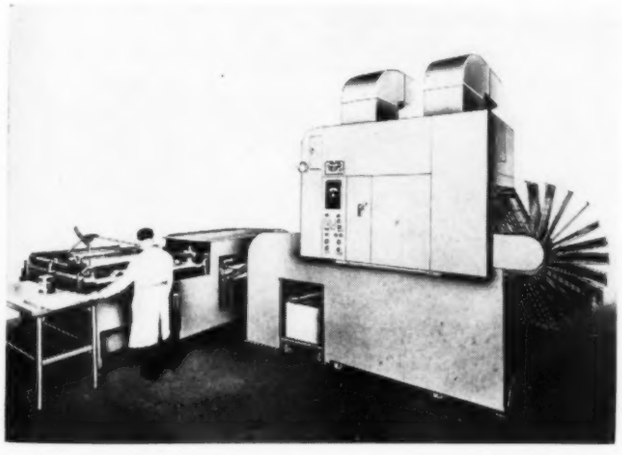
DUAL PURPOSE MAILING MACHINE

A mailing machine which is equipped with dual feeding hoppers and a dual purpose labeling head has been announced by Magnacraft Manufacturing Co., Sub. of T. W. & C. B. Sheridan Co. The dual feeding hoppers on the Model 60-D feature a shuttle feeder for magazines with thicknesses of ¼ in. to 2 in. and a rotary vacuum hopper for work ranging from a four page piece to work with a thickness of ¼ in. The feeder is recommended for labeling envelopes, postcards, newspapers and magazines. Circle No. 298 on Reader Service Card.

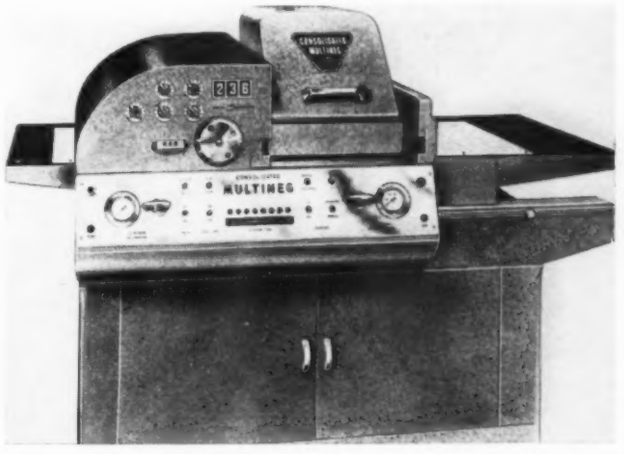
IMPROVED PHOTOCOMPOSING MACHINE ANNOUNCED BY CONSOLIDATED

An improved automatic step and repeat machine called Multineg 32 has been announced by Consolidated International Equipment & Supply Co. The machine will step and repeat negatives or positives on film, glass or press plates.

In operation, two scales are dialed—one for horizontal dimensions, the other for the total movement. Operation is then automatic. An illuminated read out device indicates how many exposures have been made and controls are provided to automatically stop the machine. This feature allows changes to be made on the 8 in. by 10 in. negative chase. The light source is said to be improved to give better overall lighting to meet the re-



Screen process printing unit can be operated by one man after training, manufacturer states. Unit consists of press, drier and stacker.



Automatic photocomposing machine will accommodate plates and films up to 32 in. Electronic parts can easily be replaced.

quirements for higher speed films used in screen process and continuous tone work.

An indexing system has been incorporated into the machine which is designed to increase the speed of the machine, reduce chance of error and cut down servicing requirements. All electronic components are of the interchangeable plug in type. The machine will handle film or plates up to 26 in. by 32 in. and is equipped with a dial selector vacuum back and an extended table and pin system. All table movements have been converted to hydraulic cylinders instead of the previously used air cylinders. Construction is of one piece. Circle No. 265 on Reader Service Card.

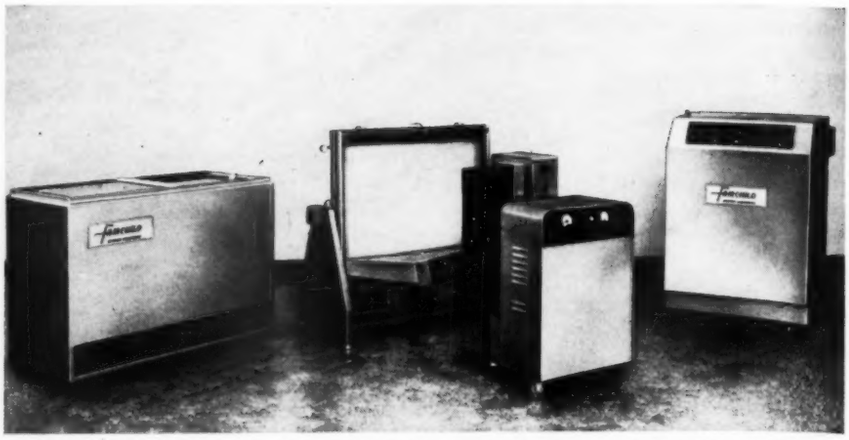
SCREEN PROCESS SILK IS AVAILABLE IN SIX MESH COUNTS, THREE WIDTHS

A domestic screen process silk, trademarked Apsco-Duro, has been introduced by Advance Process Supply Co., Inc. Available in six mesh counts, the silk is manufactured in widths of 40 in., 50 in. and 60 in. Reportedly, the product features high tensile strength, uniform mesh construction and clear transparency. Circle No. 277 on Reader Service Card.

nuARC FLIP-TOP PLATEMAKERS NOW AVAILABLE WITH MOTOR DRIVEN ARCS

nuArc Company, Inc., has announced the availability of four models of Flip-Top platemakers which are equipped with motor driven arc lamp mechanisms. Motor driven arcs are claimed to give greater light intensity, constant light values and uniform coverage.

The motor driven machanism incorporates a magnetic amplifier which controls carbon feed automatically. It is preset at the factory and is said never to need adjustment since there are no moving parts, tubes, points, etc. High power factor corrected transformers are claimed to reduce power consumption. Circle No. 275 on Reader Service Card.



Fairchild's line for processing Dycril photopolymer printing plates includes plate conditioning cabinets, flat and rotary exposure and washout equipment, arc lamps and collimators. Plug-in modular controls and adequate storage for materials are features of the equipment.

FAIRCHILD DEVELOPS EQUIPMENT FOR PROCESSING DYCRIL PLATES

A complete line of equipment for processing flat, flexible or pre-curved DuPont Dycril photopolymer printing plates has been developed by Fairchild Graphic Equipment, Inc. Units which comprise the Fairchild line include flat and rotary exposure and washout equipment, plate conditioning cabinets, arc lamps and collimators. Special equipment to meet specific requirements is also available.

Plug-in modular control units are featured on the washout equipment. The units may be removed for servicing by loosening four screws. The position of the control units allows the operator to jog the plate for inspection. Another feature is the utility tray which may be used to hold clamp magnets, anti-foam and necessary chemicals. The tray may also be used in draining and cleaning the filter.

Copy ranging in size to 30 in. by 40 in. can be handled on the flat exposure unit. The oversize vacuum frame on the unit allows it to be used for lithographic platemaking, also.

Multi-level racks that permit storage of both small and large sizes of unexposed Dycril photopolymer printing plates are a feature of the plate conditioning cabinet. Circle No. 299 on Reader Service Card.

GRAVURE FINISHING MACHINE TURNS AND POLISHES CYLINDERS

According to Amsterdam Continental Types & Graphic Equipment, Inc., a new model of the Engler Cylinder Finishing machine for turning and polishing rotogravure cylinders has been developed. Designed in Switzerland, the machine is said to be accurate to 0.0004 in.

The company indicated that setup time has been reduced since only one setup is required for two operations. After turning with sintered or tool steel, the cylinder is ready for polishing with intaglio stone. Turning may also be accomplished with industrial diamonds for precision work.

Form cylinders are said to be positioned

nuArc's Flip-Top platemakers are now equipped with motor driven arc lamp mechanisms which are said to give high light intensity.

Engler Cylinder Finishing machine is said to turn gravure cylinders to within 0.0004 in. and perform two operations with one setup.

FRONT PAGE STORY

Corona, N.Y. - In these days of increased costs of newspaper printing production, mechanical superintendents and production heads of stereotype, composing and photoengraving departments as well as press rooms, are unanimously agreed: The only bargain today is quality.

Quality can only be measured in terms of performance. Day after day, dependable, proved performance.

A glance at Page 1 of the Eastern Catalog No.24 tells most of the story. The rest of the story lies in expert processing of orders without delay, plus the consistent economy of doing business with Eastern.

These are some of the outstanding firms represented by Eastern:

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R. HOE & COMPANY, INC.	JOHNS-MANVILLE SALES CORP.
MINNESOTA MINING & MFG. CO.	WESEL MANUFACTURING CO.
THE MORRISON COMPANY	LAKE ERIE ENGINEERING CORP.
WOOD NEWSPAPER MACHINERY CORP.	HAMMOND MACHINERY BUILDERS, INC.

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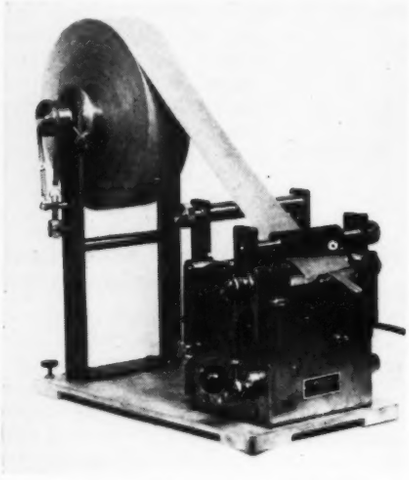
on the same bearing surface of the journals later employed in the rotary press, thus maintaining the original balance. Vibration is claimed to be nonexistent, since motors which drive the tool head and rotate the cylinder are separately fixed inside the base frame with an independent motor for the grinding stone. Circle No. 264 on Reader Service Card.

GEIGER GRAVURE PROOF PRESS MAY BE USED FOR TEST PURPOSES

A gravure production and proofing press which may also be used for testing purposes has been developed by William Geiger Tool and Mfg. Co., Inc.

Press specifications include a length of 22 in. and a width of 11 in. Height of the press is 11 in. and the unit weighs 35



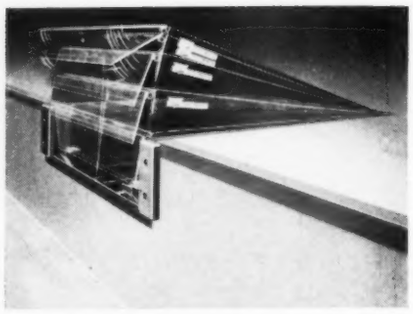
lbs. Roll size is 4½ in. wide with a diameter of 1½ in. According to the Geiger firm, special machines may be built to customers' specifications to accommodate larger rolls.

The press is electrically driven and operates on standard 110 V., 60 cy. current, and is claimed to produce precision proofs on label stock, laboratory proofs and small production runs. Supplementary equipment is available to do laminating, and heating elements may be installed. Pieces as short as 3 in. can be handfed into the press. Circle No. 266 on Reader Service Card.

DEVICE ACTUATES DOCKBOARD LIP

A feature which is said to automatically actuate the lip of the Adjust-A-Lip dockboard has been developed by Kelley Company. The accompanying picture (made from a multiple exposure photograph) shows the Adjust-A-Lip unit first in its normal shipping dock level or cross traffic position. When the unit is released from the level position by an attendant, the counterbalance raises it to the above-dock position.

The successive camera exposures show the dockboard, with the lip still in the protected position behind steel faced rubber backed bumpers, rising until the lip is high enough to swing over the truck bed. According to the announcement, at this point the lip automatically extends to its working position and locks. The adjustment is completed when the dockhand steps on the dockboard to lower it to working position where it is locked



automatically in contact with the truck bed. The lip is retracted automatically when the truck is driven from the dock. Circle No. 283 on Reader Service Card.

ANSCO REVERSAL COLOR FILM

A 35 mm. reversal color film designed for duplicating positive color transparencies and positive film strip originals has been announced by Ansco, Div. of General Aniline & Film Corp. Known as Anscochrome Duplicating Film Type 544, it is recommended for making blow-ups from 16 mm. originals and making prints directly from 35 mm motion picture projection prints. Circle No. 293 on Reader Service Card.

EHLERMANN STRIPPING MACHINE TO BE DISTRIBUTED BY GANE

The Ehlermann heavy duty stripping machine is being distributed in the United States by Gane Bros. & Co. and Gane Bros. & Lane, Inc. The equipment handles a range of sizes from 4 in. by 4 in. to 20 in. by 14 in. and accepts thicknesses ranging from 1/16 in. to 2 in. Maximum tape overlap front and back is 1 in.

Among the features of the unit is an automatic pile feeder which feeds from the bottom of the stack, reportedly allowing continuous reload of the hopper with no interruption of production. The feeder is equipped with an automatic throw-off which stops the motor when the hopper is empty.

Gummed or ungummed tapes, with hot or cold glues may be used, as well as pressure sensitive tape. A water-jacketed glue pot fitted with thermostatically controlled electric heaters for use with either glue or water is included as standard equipment. Circle No. 282 on Reader Service Card.

FLEXIBLE PLASTIC FILM DEVELOPED FOR GREETING CARD, PROMOTIONAL USES

A flexible plastic film manufactured from styrene foam has been developed by Plastics Div., Monsanto Chemical Co.

The film is claimed to be receptive to bold embossed effects and may be processed by most conventional printing methods. Sponsor recommends the product for use by the Graphic Arts industry in producing greeting cards, announcements, promotional brochures and counter displays.

Known as Santofome, the film is said to be waterproof, resistant to tearing, and light in weight. It has been accepted for use in food packaging by federal authorities. Santofome is available in thicknesses from 0.010 in. to 0.030 in. and in rolls 36 in. wide up to 7000 ft. long. The product may be bonded to paper. Circle No. 279 on Reader Service Card.

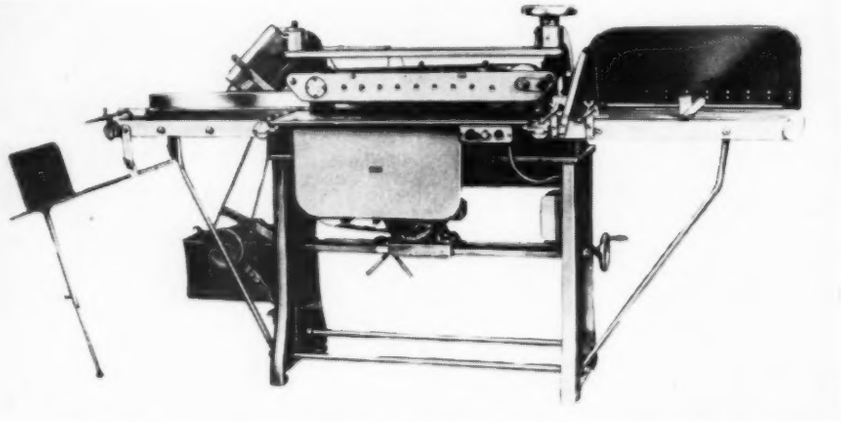
EDMUND MAGNETIC INK COMPARATOR USEFUL FOR GO-NO-GO MEASUREMENT

An improved model of its magnetic ink comparator for go-no-go measurement by pressmen has been announced by Edmund Scientific Co. According to company officials, the E-13B2 reticle on the unit has been improved so that visual comparison can be made against specified tolerances of the American Banking Assn. under 12X magnification.

The reticle is designed for checking character skew, character width and alignment, coverage, voids, field boundaries and line widths in magnetic ink printing. Diameter of the lens is 11/16 in.; field of view, ¾ in.; focal length, 13/16 in. The comparator features the Pre-Cop-Tic triplet magnifier and is said to be of a size convenient for pressmen to carry and use. Circle No. 285 on Reader Service Card.

VACUUM BACK FOR GOODKIN CAMERAS HOLDS VARIOUS MATERIALS FLAT

A new camera back, says M. P. Goodkin Co., is applicable to Goodkin Vertical 18 in., Vertical 24 in., TransferMate and



Ehlermann stripping machine operates with gummed, ungummed or pressure sensitive tapes.

Automatic bundling machine saves $37,000 a year

AT FORT LAUDERDALE NEWS

At the Fort Lauderdale News an automatic USS Steel Strapping Machine Model 12 compresses, wraps, tensions, ties and ejects an average of 70,000 papers a day, seven days a week. It has cut operating costs at least $37,000 dollars a year over the previous method of bundling. Even when special sections are inserted in the paper by a crew of 33 "extras," there is no delay in production. On a recent Saturday—the only day when one edition is run—60,000 copies of a 56-page paper were put out in less than two hours, and the press run, insertion of special sections and strapping were all finished almost simultaneously.

Model 12 handles bundles from 4 to 14 inches thick and makes up to 24 ties a minute. The lightweight, high-tensile #18 gauge USS Steel Strapping is economical and holds papers securely, even when bundles get a fast, four-story circular chute-ride to the loading platform.

Mr. J. Millard Cain gave other reasons for his paper's purchase of the USS Steel Strapping Automatic Model 12 during a recent interview: "It costs less than competitive equipment; it presents no maintenance problems; and steel strapping costs less and is easier to handle."

Free Technical Assistance. Our Strapping Specialists are available to assist you to work out bundling and packaging procedures that will help speed up your operations. For further information just fill in the coupon below.

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For More Information Circle 70 on Reader Service Card

Model A cameras. A larger 18 in. by 24 in. back is also available for the Vertical camera. Hinge mounting is provided for loading ease.

The back with its pump and motor is designed for darkroom use with the negative and paper materials of Gevacopy, Ektalith and other matrix transfer processes. It is said the vacuum produced by the industrial type motor holds any Graphic Arts material flat regardless of its tendency to curl.

Borders of various film sizes on the camera back are indicated by lines drawn on plexiglass along which holes have been drilled. The number of holes is doubled at the corners of the rectangles formed by these lines to increase the vacuum hold. Circle No. 304 on Reader Service Card.

LABELS COLOR CODED FOR EASY PAPER IDENTIFICATION

A new system of color coding labels designed to make it easier for printers to distinguish between paper grades has been announced by Mead Papers, Inc. Papers have been combined into six major groups, with each group being assigned a different label color. Groupings and color codes are: Coated offset—yellow; uncoated offset—red; coated letterpress—orange; uncoated letterpress—rose; Mead business papers—blue, and Moistrite and Northlite business papers—green.

In addition to color coding, the company has announced the use of larger type faces in the printing of these labels. Mead indicated that the system was expected to reduce errors in shipping, simplify record keeping and make storage arrangement easier. Circle No. 256 on Reader Card.

WOOD DEVELOPS THE SUPERMATIC AUTOMATIC PLATE CASTING MACHINE

An automatic stereotype plate casting machine has been introduced by Wood Newspaper Machinery Corp. Known as the Supermatic, the machine is said to produce 3½ plates per min.

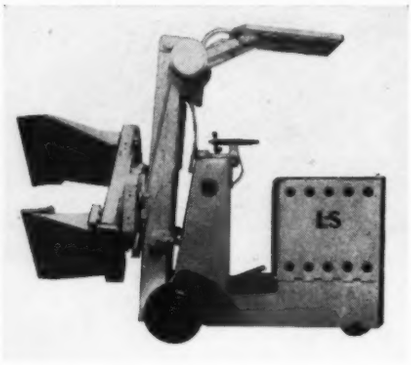
Operation of the machine is described thus: When the mat and pouring sheet have been locked in position, the operator pushes the start button on the electrical control panel. Then casting, shaving, tail severing and ejecting, milling of the plate, cooling and drying of finished plates follow in proper sequence. The finished plate is discharged onto the pressroom conveyor.

The cast plate is moved through the machine by a propelling mechanism and power-driven conveyor rollers. The plate tail is severed while the plate is being trimmed and is ejected onto a conveyor which takes it to the furnace.

The number of plates to be cast from each mat is controlled by a dial counter which may be preset by the operator. Circle No. 300 on Reader Service Card.

ELECTRIC LIFT TRUCK WITH REVOLVING PAPER ROLL GRAB

Precise clamping pressures in handling paper rolls are claimed for the Lewis-Shepard Products Model E SpaceMaster electric truck. The clamping pressure of



the grab is regulated by a pressure regulator valve and gauge. Contact pads on the revolving paper roll grab are described as being covered with a durable high friction surface for handling with minimum clamping pressure and elimination of roll distortion.

The range in paper roll sizes which can be handled with the Model E range from 26 in. to 50 in. in both vertical and horizontal positions. The truck clamp is available with 180, 270 and 360 deg. rotation. Circle No. 305 on Reader Service Card.

CENTERING TECHNIQUE DEVELOPED FOR USE WITH ATF TYPESETTER

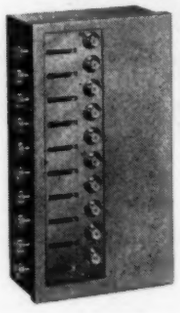
American Type Founders Co., Inc., has developed a technique for centering words and letters on ATF Typesetter filmsetting equipment. The technique is called Retnec (center spelled backward), since the method consists of turning over and reversing the tape which operates the photounit.

In vertical Retnec, where headings are desired to be arranged vertically, words are typed backwards. When a letter is less than the maximum units, the number is indicated on a pointer. Units of space are then added to bring the total to the maximum. The tape then is flopped and operated through the photounit backwards, thus acting upon the centering code before the letter. The word is reproduced with the letters centered over one another.

Full line Retnec, or centering horizontally, is frequently used in the production of address labels. In keyboarding, the operator types normally from left to right. Half the necessary space units which the machine indicates as necessary for a centered line are added. Again the tape is flopped and reversed through the photo unit. The result is the centering of each line. Circle No. 254 on Reader Service Card.

PANEL MONITORS PRODUCTION TIME

An instrument called a Time Utilization Meter Panel for monitoring production time of up to 10 machines or operations has been developed by Gorrell & Gorrell.



Ten individual running time meters and signal lights are connected to 10 different machines or operations and can be monitored at distances up to 5000 ft. Depending upon the model, the panel can be read to the nearest hour and tenth; hour, tenth and hundredth, or minutes and tenths. The panel may be connected to indicate productive machine time, idle or lost time, or down for service time.

Because the total running time of each machine is continuously accumulated, the data can be used to compute machine costs, determine time and costs on leased equipment, or know the machine utilization for scheduling or preventive maintenance.

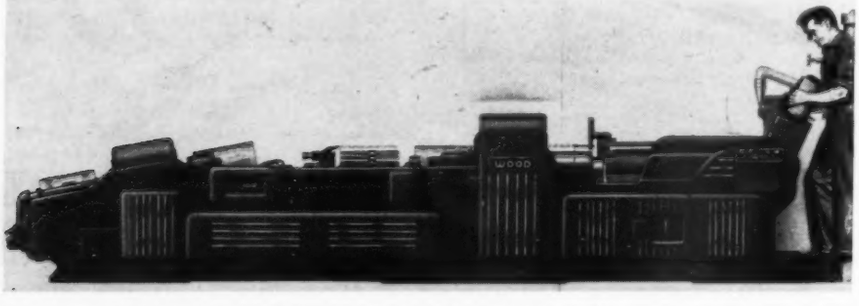
When lighted, the signal light indicates that the machine is producing and that time is being recorded. The panel does not record motor idling time. Dimensions of the panel are 13 in. by 6⅞ in. by 4 in. Circle No. 274 on Reader Service Card.

FRENCH PLANING MACHINE CAN BE USED FOR ALL PRINTING MATERIALS

Henry P. Korn, Associated Inc. has announced the introduction of the JB Mincel grinding-planing machine to the United States. The machine, manufactured in France, is claimed to plane lead, zinc, brass, copper, aluminum, wood, rubber, thermoplastic and thermosetting materials. The machine is said to surface mill or plane with a precision which ranges from ±0.0005 in. to ±0.001 in. depending upon the material.

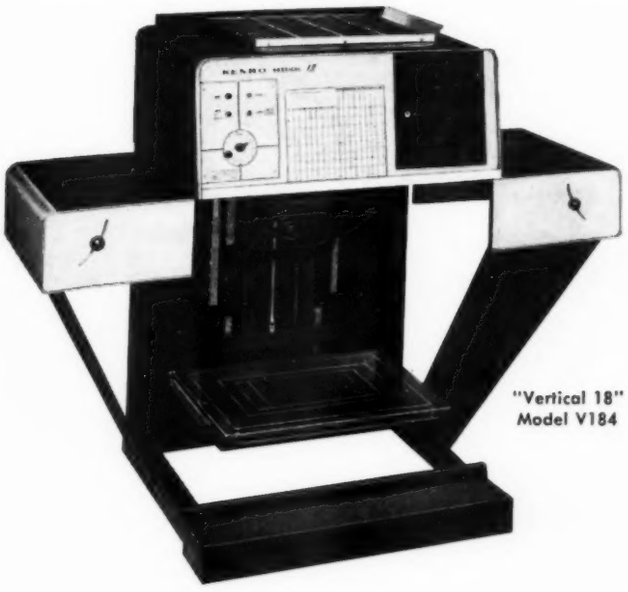
A 3 h.p. vacuum pump supplies suction to the table and holds the plate with a pressure of 10 lbs. p.s.i. while planing operations are taking place. Up to 0.040 in. cuts in certain materials may be made according to the company. Other specifications include a machine width of 41¾ in., a length of 49⅝ in. and a height of 65⅜ in. Table size is 18⅜ in. by 24⅝ in.

The machine is supplied with various carbide cutters and grinding wheels which are suitable for the various materials to be planed. Maximum plate thickness



The Supermatic handles all phases of platemaking, from pouring metal to cooling plates.

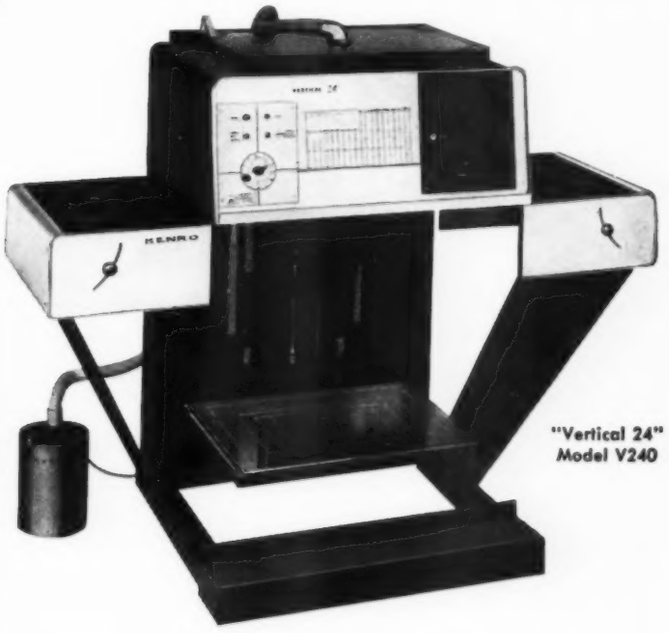
Which Kenro VERTICAL Camera is best for your work?



"Vertical 18"
Model V184

THE "VERTICAL 18" is extremely versatile. It makes line and halftone negatives up to 14" x 18" in size, can be equipped with stayflat or vacuum back. Interchangeable heads also available for making Ektalith, Gevacopy or xerographic exposures. When equipped with Prismatic head you can use your Kenro camera for making right-reading film negatives or direct photocopies of reproduction quality in one step, without an intermediate negative.

Regardless of your press size, if copy calls for shooting 8½" x 11" pages two-up or 11" x 17" bleed, then the Kenro "Vertical 18" is the camera for you.



"Vertical 24"
Model V240

THE "VERTICAL 24" brings you the advantage of big camera capacity in an economical, compact, space and step saving unit. It makes line and halftone negatives and other types of exposures up to 18" x 24". Shoots 8½" x 11" copy four-up, covers a full size newspaper page. Is equipped with vacuum back, and can also be equipped with adapters for making Ektalith, Gevacopy or xerographic exposures.

Prismatic head allows you to make one-shot proofs of paste-ups, enlargements or reductions of type matter or illustrations quickly and economically. If you run a newspaper, need big negatives or have a high volume of work, install a Kenro "Vertical 24".

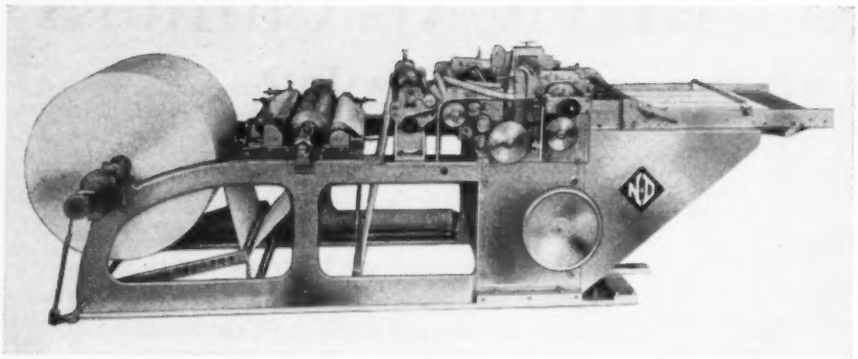
BASIC KENRO ADVANTAGES

- **Precision construction**—ball bearing copy and lensboard slides, alignment checked by collimators.
- **Superior lenses**—standard equipment includes special color-corrected Goerz Dagor lenses, the finest, most linear optics available.
- **Micro indicator size and focus system**—permits accurate sizing and resetting to .002" and ready lens interchangeability.
- **Spring-loaded compensating copyboard**—with cover glass hold-up.
- **Adjustable angle, stationary lighting**—gives even illumination, permits exposures at optimum lens settings, whether shooting same size, enlarging or reducing.
- **Push-button exposure**—with relay equipped automatic reset timer.
- **Modern design, advanced engineering**—from the largest and most experienced manufacturer of vertical process cameras.

Ask your dealer to demonstrate . . . or write for information and prices.

KENRO GRAPHICS, INC. Dept. G, Cedar Knolls, New Jersey

For More Information Circle 97 on Reader Service Card



Rubber plate press marketed by Nygren-Dahly Co. features web cut off in ¼ in. increments.

which the Mincel grinder will plane is 1¼ in. Plate cuttings are exhausted into a canvas bag. Circle No. 258 on Reader Service Card.

FLAT BOTTOM PLASTIC PHOTO TRAYS

Richard Manufacturing Co. has announced the availability of flat bottom photo trays. Reportedly, the flat bottom trays eliminate the danger of transferring any reflected images of raised designs on the tray bottom to the film. Manufactured of styron plastic, the trays have a non-porous surface which is resistant to acid and stain. Trays are made in four sizes: 8 in. by 10 in., 11 in. by 14 in., 16 in. by 20 in. and 20 in. by 24 in. A pouring lip is featured on the two smaller sizes. Circle No. 289 on Reader Card.

WEBFED RUBBER PLATE PRESS OFFERS CUTOFF IN ¼ IN. INCREMENTS

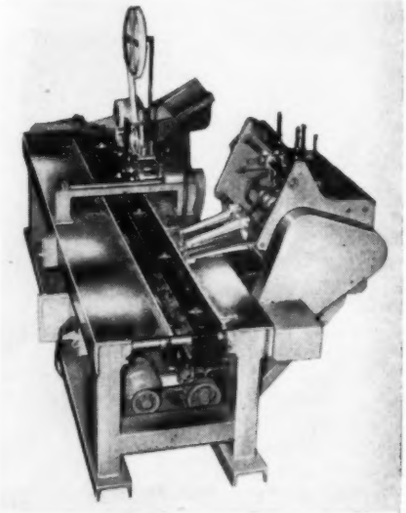
A rubber plate specialty printing press which is claimed to offer an extremely wide range of cutoff sizes has been introduced by Nygren-Dahly Co.

The N-D rotary roll feed press handles forms up to 17 in. by 22 in. and at speeds reported to be up to 20,000 per hr. Sheet size cut offs range in ¼ in. increments from 5½ in. to 22 in. Special units can be supplied to cut up to 24 in. lengths. Dial controls regulate color register, cutoff register and form register.

The press initially is equipped with a roll feed unit, one color one side printing unit and a variable cutoff unit. The machine is designed, however, to accept units for two or three color printing on one or both sides and for numbering, carbon laminating, perforating and cross perforating. These addable units are installed in prearranged positions in the original press frame and do not increase required floor space. Circle No. 271 on Reader Service Card.

HEAVY DUTY END SHEET STRIPPER

The high speed heavy duty end sheet stripping machine, designed and developed by Magnacraft Mfg. Co., has been announced by T. W. & C. B. Sheridan



Co. The Model ES-7 end sheet stripper applies the stripping material to the end sheets with precision register, says sponsor. The stripping material is cut and applied without projection from the end sheet. Circle No. 360 on Reader Card.

NEW LIGHTING SYSTEM INCORPORATED IN KENRO'S VERTICAL 18 IN. CAMERA

A new stationary lighting system has been incorporated in a revised model of the vertical 18 in. process camera manufactured by Kenro Graphics, Inc.

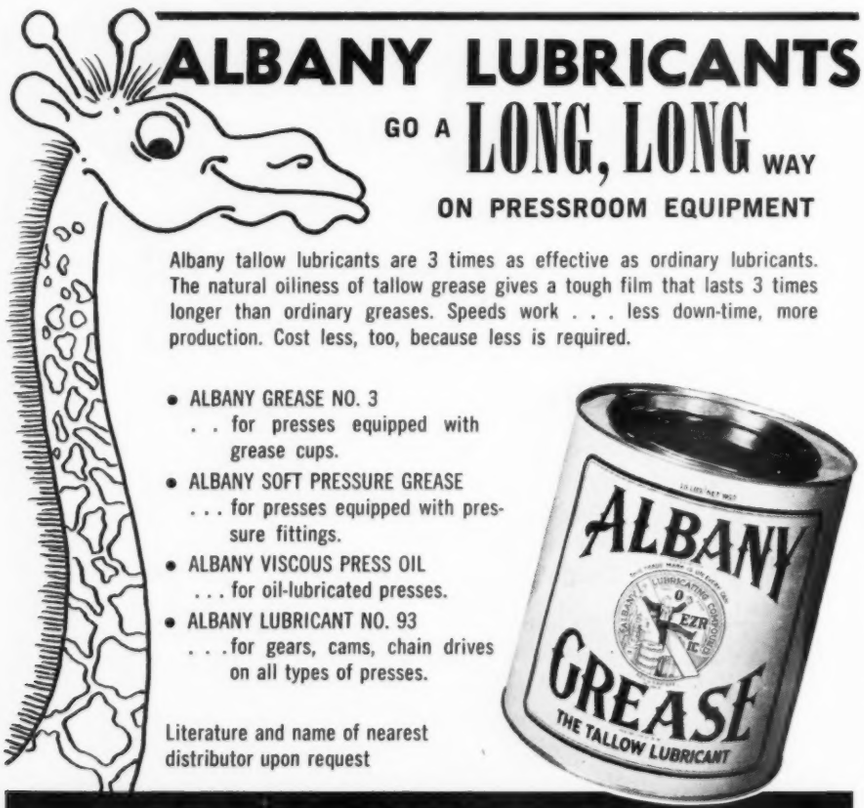
The lighting system is designed to make shorter and more even exposures which are desirable in critical operations such as positive-to-positive work with the prismatic head. The system is also said to yield improved results on Ektalith and other matrix transfer plate methods.

Four high intensity 500 W. Quartzline lamps are utilized in the new model. Each lamp in the four-corner system is mounted vertically and is said to need no operator adjustment regardless of the position of the copyboard.

A ColorTran converter provides normal and very high intensity lighting. Manufacturer explains that the high degree of intensity and color temperature result in shorter exposures and improved image detail. Circle No. 297 on Reader Card.

JET-CUT PAPER TRIMMING KNIFE

A new paper trimming knife, the Jet-Cut, has been developed by Ohio Knife Co. According to the manufacturer, the face area of the knife is polished as well as the bevel cutting edge to reduce drag and draw and maintain cutting accuracy. Circle No. 281 on Reader Service Card.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PRINTING INDUSTRY PATENTS

Covering patents issued June 7, 14, 21 and 28.

All new patents for the printing industry are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

OPTICAL LINE JUSTIFICATION

To obviate lateral displacements of a document, the optical device of this invention uses a pair of prisms rotatably mounted about axes parallel to the prism edges and disposed at right angles to the optical axis of the system. No. 2,939,370 by Raymond Bouffilh and Charles Savigny, assignors to Societe Anonyme dite: Ateliers Bariquand & Marre.

TYPECASTING MACHINES

The invention features a new leaf spring connection between interchangeable ejector rods with which ejector blades are connected and the ejector slide of modern typecasting machines in which the ejector rods are arranged side-by-side. The connection can be actuated simply by manually raising leaf spring. No. 2,939,573 by Karl Debus.

LEAD RULE BROACHER

A lightweight, portable machine for use in small print shops is so constructed that it will provide an extremely accurate machine for correctly punching notches or broaches in an edge of a lead rule. The machine includes a scale and pointer which is positioned so that each punch relative to a rule is always clearly visible to the operator. No. 2,940,349 by Leslie V. York and Loren F. Ludlum.

TYPE HOLDER

For use in printing or in displays such as are ordinarily posted on bulletin boards, this holder is made of rubber or other flexible material so that it can be cut to the length desired and so that it can be used in either flat form or curved around a cylindrical surface. It may be used once and discarded. No. 2,940,389 by H. Devon, assignor to J. Matthews & Co.

CHARACTER PRESENTATION FOR PHOTOTYPOGRAPHIC MACHINE

The need for relative movement between a character grid and an optical system is obviated by the arrangement of this invention. The characters of the font are rapidly projected onto photographic film in any desired order by the controlled projection of a light through a prism at the desired angle to automatically select the size of character required. No. 2,942,538 by Edwin W. Bechtold, assignor to Mergenthaler Linotype Co.

Platemaking:

PHOTOCHEMICAL EXPOSURE

For preparing typographic, lithographic and gravure printing plates, this method comprises coating an object with a thin layer of a photoconducting insulating material consisting essentially of a particulate photoconductor dispersed in an electrically-insulating, film-forming vehicle. A latent electrostatic charge pattern is produced on the layer, and the image is developed to produce a powder image. Permanent full size transparencies are not needed. No. 2,939,787 by Edward C. Giaimo, Jr., assignor to Radio Corp. of America.

IMAGE REVERSING SYSTEM

For two-sided lithographic reproduction processes and similar processes where both sides of a sheet of paper stock are printed at the same time on a single pass through the press, this copying camera uses two selectively operable image reflecting elements at a direction changing point in

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For More Information Circle 114 on Reader Service Card

the image light path, one comprising a plane surface reflecting surface and the other a compound surface. No. 2,940,358 by Joseph F. Rosenthal, assignor to Haloid Xerox, Inc.

COMBINATION PLATE ETCH

A developed photoengraving plate containing both line and halftone images and made of magnesium, magnesium base alloys, or zinc is etched by impinging thereon an etching bath of diethylbenzene and an aqueous solution containing nitric acid, sulfosuccinic acid esters prepared from aliphatic alcohols and sodium sulfate. No. 2,940,836 by Marvin H. Fishaber, assignor to The Dow Chemical Co.

PHOTOGRAPHIC RESIST

Valuable photomechanical images, such as stencils, can be produced by employing organic solvent-soluble colloid materials, such as natural and synthetic rubbers, etc., sensitizing these with organic solvent-soluble aryl azides, and after exposure removing the unexposed parts by treatment with an organic solvent. No. 2,940,853 by John J. Sagura and James A. Van Allan, assignors to Eastman Kodak Company.

MICROMETER LINEUP TABLE

The table is of the type disclosed in patents 2,252,535 and 2,421,686. A more accurate line-up is assured by the present micrometer as the straightedge is operated through increments rather than through a vernier adjustment and accuracy to the degree of thousandths of an inch is assured. No. 2,942,351 by Claire N. Brewer and Charles O. Goss, assignors to International Typographical Union of North America.

COLOR CORRECTION GAUGE

The gauge is adapted to compose colors of any selective variety, value and intensity and it can be operated to translate the composed colors into corresponding gray representations, to serve as a comparative guide for retouching either the positives or negatives for use in color printing processes. No. 2,941,312 by Guido Mattucci.

Printing Presses:

PRINTING ROLL ASSEMBLY

The roll is formed of extruded aluminum alloy possessing a yield strength of at least 40,000 p.s.i. To assemble the roll elements, the shell is heat-expanded and gudgeon is cold-shrunk, after which the respective parts are brought into and held in juxtaposition and permitted to return to room temperature. The roll is then machined and given the desired surface treatment. No. 2,940,388 by John J. Schaefer, assignor to Reynolds Metals Co.

AIR HEATING DEVICE

Tubular, electrically heated elements are adapted to be used in printing apparatus for directing a transverse series of jets of hot air onto a printed web. The elements may be used in any desired multiple and arrangement to accomplish the drying action required. No. 2,941,-062 by Angus Murray Halley, assignor to James Halley & Sons, Ltd.

AUTOMATIC INKING APPARATUS

The apparatus is related to an inking device of the type disclosed in patent 2,890,-652 and provides an automatic control for opening and closing a valve, the inking width being set previously by means of an ink distributor tube. The control sets a power accumulator, such as a spring drive and releases it at preselected intervals. No. 2,941,467 by Martin Jauch and Alfons Rilinger, assignors to Roto-Werke A.G.

DRIVE FOR ROTARY PRINTING

A transmission for use with a printing press is designed to compensate for wear and to avoid backlash in efficiently handling a web of paper under the desired tension. A shaft extends between each pair of adjoining stations and an impression station and driven roll, each shaft having at opposite ends gears engaged respectively with gears of the proximate printing cylinders and the gear of each driven roll. No. 2,942,543 by John G. McIlvain and George J. Wolfer, assignors to Downingtown Paper Box Co.

PRINTING PRESS

For printing signs and show cards of paper-board, this press provides for automatically gripping a card to be gripped and printed by a manual operation to minimize the operations and increase the

(*Continued on Page* 89)

GAY-LEE
CARBIDE TIPPED
THINSAW
CUTS ALL
COMPOSING ROOM
METALS
Stays sharp longer!

*Carbide tip has circular seat that provides more brazing surface, positive seating and greatest holding strength. Patented, manufactured under license.

You get everything you want in a Gay-Lee Printer's CARBIDE Thinsaw. Thinsaws made by Gay-Lee are 6 points thin for delicate work yet cut fast and accurately. There is no bothersome sticking pile-up or scream. Every cut is smooth, fast, and accurate.

Gay-Lee puts the finest materials and workmanship into its saws. The CARBIDE tip is set in a patented circular seat and is securely held to the steel body. It offers more brazing area, gives cleaner cuts with excellent backrake cutting and generally eliminates the need for trimmer blades.

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GAY-LEE THINSAW BLADE
for Mohr Lino-Saws

Through the research facilities of the Gay-Lee Company, a new saw blade has been developed specially for linotype machines. This new saw reduces noise of operation, cuts cleaner and faster and lasts longer than any other blades of this type heretofore available.

These saws are available from your local printing supply distributor or direct from the manufacturer.

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number of cards which can be completed in a given time. No. 2,942,544 by Martin L. Williams.

Printing Inks:

PRINTING INKS CONTAINING UREA HYDROGEN PEROXIDE

The ink which dries by oxidation and is characterized by improved drying in situ when exposed to ultra-violet energy, comprises a pigment, a vehicle and as an oxidizing agent hydrogen peroxide urea. No. 2,939,795 by Paul Lecompte, assignor to Societe Anonyme dite: Establissements Lefranc.

FLUORESCENT PRINTING INK

The inks are adapted for use in high speed printing operations and are obtained by combining a resinous material in pigment form with the desired organic fluorescent dye and desired vehicle. In one form it is prepared by combining a thermoplastic polymer as a base, preferably vinyl-vinylidene chloride copolymer or polyacrylonitrile of pigment particle size in aqueous dispersion with a resinous forming monomer and subjecting the mixture to polymerization. No. 2,940,937 by Samuel J. O'Brien, assignor to American Cyanamid Co.

METALIZED COATINGS

The coatings can be incorporated in printing and rotogravure inks, and are related to the art disclosed in patent 2,297,691. The novel metal mirror plate particles of this invention produce wholly unexpected and desirable decorative effects in combination with film forming materials. No. 2,941,894 by Walter R. McAdow, assignor to American-Marietta Company.

"I buy a press with all this roller area, and you go out and write an order for 50 name cards."

Feeding, Folding, Delivery:

SPLICING CONTROL DEVICE

The control employs a revolutions per minute counter so that the end of a roll may be more accurately determined and there is a minimum of core waste in splicing operations. No. 2,939,646 by Wilfred H. Stone, assignor to Meredith Publishing Co.

SHEET FEED AND REGISTER

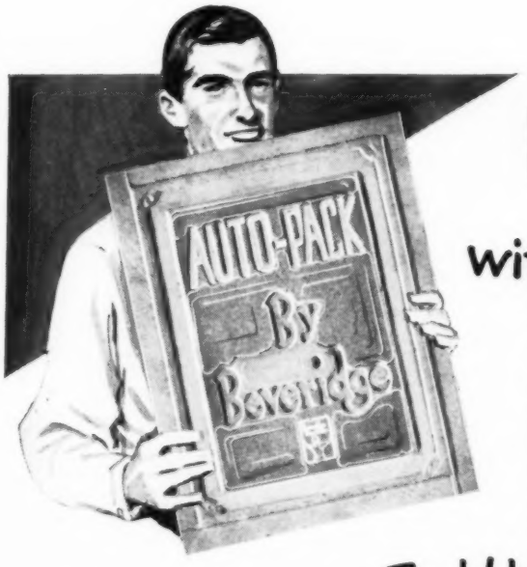
In a feeder of the type covered by patent 2,631,849, the grippers are arranged so as to travel slightly in advance of the extreme front edge of a sheet. The registering and holding mechanism comprises a pivotally mounted stop in the form of a tongue and the register stop is an abutment capable of engaging the end of the pivotally mounted stop, which stop is secured to gripper shaft. No. 2,939,703 by Fred Whyte.

SHEET DELIVERY MEANS FOR ROTARY PRINTING PRESS

A feature of this sheet delivery mechanism is that the diameter of the delivery cylinder is double that of the impression cylinder. This permits the use of delivery cylinder sprockets of lesser diameter than the delivery cylinder diameter, without the position of the delivery cylinder about its impression cylinder being controlled by the length of the sheets and without a change in speed between the leading and tail edges of the sheet being printed. No. 2,940,387 by Howard A. Pritchard, assignor to Harris-Intertype Corp.

SPLICING MACHINE

The machine is of the type in which a



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new web of material bearing a layer of adhesive at its leading end is brought to a position adjacent an expiring roll and then spliced to same without stopping the machine. It includes a new sensing device which automatically sets the mechanism in motion as the trailing end of the expiring roll is fed therepast so as to make unnecessary any manual intervention or supervision. No. 2,940,507 by Richard A. Butler, Jr.

CORE SHAFT REMOVER FOR PAPER UNWINDER

A simple pivoted lever arm core shaft shifting mechanism is adapted to be rocked upwardly under an empty core shaft by the manual manipulation of a hand wheel to quickly and easily effect the shifting of an unwound reel away from the unwind bearings after a reel of paper has been unwound. A hoist may be used to bring a fresh reel of paper to be dropped into working position. No. 2,940,681 by Louis P. Fournier, assignor to International Paper Co.

STEERING ROLL CONSTRUCTION

In handling a web of paper passing through a high-speed, multi-color printing press, this construction provides for coupling a roll support with any one of a plurality of pivotal mechanisms provided at different positions transverse of the press so that different widths of web can be handled. No. 2,940,752 by Carl L. Deeken, assignor to Electric Eye Equipment Co.

PATENT SEARCHES

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, write

INVENTION, INC.
Munsey Bldg., Washington, D. C.

WEB SUPPLY MECHANISM

By means of an electromagnetically operated brake positioned at each roll position and a circuit control for the brakes, the tension control can be transferred from the peripheral brake to the electromagnetically operated brake to enable the various requirements which are involved in effecting a web renewing operation, to be carried out in a simple fashion. No. 2,941,742 by Claude Edward Frederick Willis, assignor to R. W. Crabtree & Sons, Ltd.

SHEET CUTTING AND FOLDING MACHINE

For cutting and folding sheets to a predetermined size from a running web, this machine provides for mounting tucking blades on one center and cutting knives on another center so that the tucking blades can be regulated independently of the cutting knives and the fold line can be varied without affecting the rate at which the paper is fed or the size of the sheet itself, which is commonly dictated by the size of the printing cylinder. No. 2,941,798 by Charles A. Harless, assignor to Hess and Barker.

SHEET SEPARATOR AND HANDLER

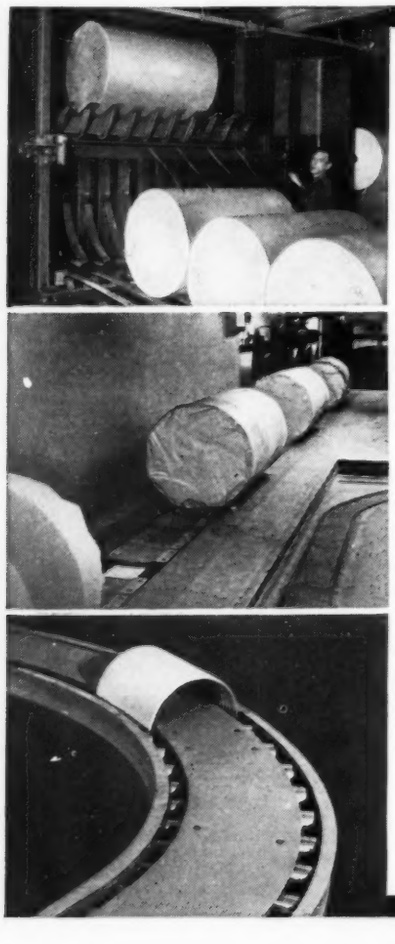
The device uses the suction cup type of lifting mechanism and overcomes any tendency of the sheets to stick together by bending the sheets. It also includes a sheet straightening device. No. 2,941,-799 by Adolf C. Reincke.

DUPLICATOR SHEET FEED

Feeding is improved by fluffing the sheets by directing air against the top of the stack of paper from air nozzles, which air nozzles are movable vertically or downwardly as the stack is decreased. The movement is automatic as a feeler is included to cooperate with the height of the stack. No. 2,942,877 by Wallace R. Fowlie, John L. Tregay and Edgar H. DuBois, assignors to A. B. Dick Co.

CHUCK FOR PAPER ROLLS

The chuck is made of lightweight aluminum or other light metal and by means of separable, cooperating wedge parts, it is adjustable to many sizes so as to fit many sizes of rolls for printing presses. No. 2,942,892 by Permil N. Nelson, assignor to Lynn H. Ewing.



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For More Information Circle 161 on Reader Service Card

Partlow CAST-A-TROL on Linotype at Indianapolis Star and News. Mr. T. R. Gardiner, Chief Composing Room Machinist, cooperated in development of the new control.

NEW PARTLOW CAST-A-TROL

takes guesswork out of typecasting temperatures . . .

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Company.....

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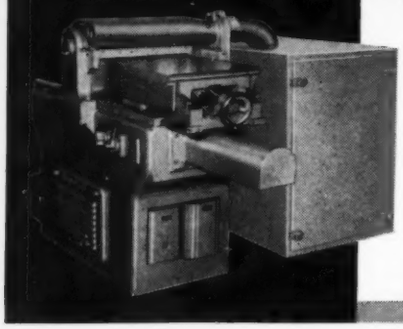

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For More Information Circle 124 on Reader Service Card

Binding, Cutting, Perforating:

FORMING HINGE JOINTS IN BOOKS

The machine is designed for handling cased books with the spine uppermost and forming the hinge joint while the books are in continuous movement at high speed on a conveyor belt, but without movement between the joint forming irons and the books when they are nipped. The machine may be fitted into an assembly line including conventional casing-in machines. No. 2,939,161 by Robert L. Schoenberger, Jr., assignor to R. R. Donnelley & Sons Co.

BLOCK SHEET STACKER AND FORWARDING DEVICE

These patents relate to the problems encountered in the handling of successive blocks of paper sheets as they are fed to and removed from a trimming press. They eliminate manual lifting of the blocks of paper, keep edges of paper stack more even and speed up the trimming operations. Nos. 2,940,616 and 2,940,617 by Arthur Mather Reed, assignor by mesne assignments, to Charles R. Stevens, Inc.

COLLATING MACHINE

The machine is of the type in which a rotary storage drum with generally radial storage pockets is adapted to receive the sheets of a booklet for assembly. After collection, the machine delivers each batch of collated sheets in a different position so that each set of sheets is easily separated from each other. No. 2,940,750 by Luis Mestre.

CUTTER SAFETY DEVICE

The invention provides, in a machine for cutting paper, electrical controls that are interrupted during the changing of the knife to prevent the application of operating forces to the knife operating mechanism. This obviates all possibility of injury to an operator. No. 2,939,357 by Russell I. Haywood, assignor to Harris-Intertype Corp.

BOOK CONSTRUCTION

A new book construction features the use of pages which are folded in a manner to furnish integral index tabs, which tabs may be placed at the upper or lower margin of the sheet. The sheets with integral tabs may then be assembled by conventional book collating and binding machinery. No. 2,941,819 by Albert E. Groody.

BINDING DISPLAY BOOKS

The method is related to that disclosed in patent 2,546,878. The present picture book has its pages secured to the marginal surfaces of inside faces of the background pages or covers rather than to the extreme free edges and provides correct pregumming and accurate location of the pages and background sheets with little hand labor. No. 2,942,283 by Lloyd E. Pitner.

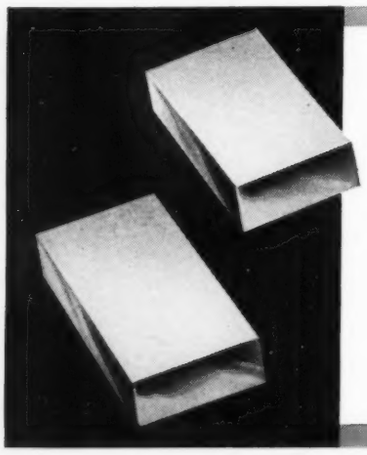
Mailroom:

NEWSPAPER STACK STOP

Stacked newspapers to be tied in a tying machine can be delivered to pusher or deflector mechanism from either side of a conveyor. This increases the flexibility of the use of the conveyor, as any workpiece can be selectively stopped in front of any pusher, regardless of the direction of workpiece travel. No. 2,942,715 by Robert E. Miller, assignor to the Journal Company.

MECHANISM FOR COUNTING AND STACKING ARTICLES

Two stackers of the type covered by patent 2,769,378 are mounted side by side to utilize common shafts and drives. A counting system and a collecting basket are provided for each stacker. The arrangement makes it possible to divert a magazine or other element which jams on one stacker to the other so that the count is not distorted and it is unnecessary to stop the machine to remove the jammed article. No. 2,939,578 by Kenneth H. Hansen, Frederic E. Howdle, and Theodore B. Jochem, assignors to Cutler-Hammer, Inc.



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For More Information Circle 115 on Reader Service Card

Helpful Literature

(Continued from Page 34)

has been published by Signode Steel Strapping Co. Paper rolls with diameters up to 72 in. are handled by the unit. Circle No. 349 on Reader Service Card.

GOLD AND SILVER PLASTICO BINDINGS

Information and price schedules on its gold and silver Plastico bindings have been prepared by Plastic Binding Corp. Reportedly, the gold or silver of the binding is protected by a coating of Mylar polyester plastic which prevents the color from wearing off. Circle No. 323 on Reader Service Card.

Miscellaneous

PLANNING A GRAPHIC ARTS SHOP

Plans for equipping a Graphic Arts shop for various age levels are outlined in a booklet published by Challenge Machinery Co. Levels covered include junior high school, senior high school, trade school and college. The recommended equipment is illustrated and described. Circle No. 315 on Reader Service Card.

PAPER EQUILIBRIUM TESTER

An illustrated sheet has been prepared on the Patra Pet paper equilibrium tester by Testing Machines, Inc. Reportedly, the instrument may be used to determine the maximum change of size or shape likely to occur when paper is unwrapped from sealed packs. Sponsor states that figures obtained from testing paper with the Patra Pet may be used to determine whether the paper can be used safely at once or if it requires conditioning. Circle No. 319 on Reader Service Card.

pH METERS FOR THE GRAPHIC ARTS

Literature describing pH meters which are said to have many applications in the Graphic Arts has been made available by Photovolt Corporation. Circle No. 314 on Reader Service Card.

VINYLS FOR CATALOG COVER DESIGNS

A swatch book of imported vinyls for use in designing covers for catalogs and books is offered by Strauss International Corp. The covers are said to be nontarnishable and may be heat-sealed without cracking. Circle No. 313 on Reader Service Card.

SELECTING TIMING BELT DRIVES

An eight page bulletin entitled *Five Simple Steps to the Selection of Timing Belt Drives* has been prepared by T. B. Wood's Sons Co. The steps of selection are explained and the method of computation is illustrated. Circle No. 324 on Reader Service Card.

PALLET VS. PALLETLESS HANDLING

A booklet entitled *Pallet or Palletless Handling* has been published by Automatic Transportation Co., Div. of Yale & Towne Mfg. Co. It is the purpose of this literature to give the user of industrial trucks the pro's and con's of both systems. Circle No. 312 on Reader Service Card.

PORTFOLIO OF WESTVACO SAMPLES

A portfolio of Westvaco sample stock is available from West Virginia Pulp and Paper Co. Included in the portfolio are samples of letterpress coated, letterpress uncoated, lithographic coated, lithographic uncoated, post card, and business paper stock. Circle No. 307 on Reader Service Card.

FAIRCHILD GRAPHIC EQUIPMENT

Descriptive literature on its line of equipment for the Graphic Arts has been prepared by Fairchild Graphic Equipment, Div. of Fairchild Camera and Instrument Corp. Featured in the literature are Dycril plate processing equipment, the Teletypesetter, Fairchild's leasing plan and the Multiface perforator. Circle No. 330 on Reader Service Card.

IMPACT COATED BOOK AND COVER

Achievement in Increased Readership is the title of the brochure published by Appleton Coated Paper Co. A portfolio of sample stock is included with the brochure, which features Impact coated book and cover stocks. Circle No. 333 on Reader Service Card.

BATTERY-POWERED FORK TRUCK

Bulletin SS-478 describing and illustrating the Utilitruc 7024 has been published by Industrial Truck Div., Clark Equipment Co. The battery-powered fork truck has a capacity of 7000 lbs. Circle No. 317 on Reader Service Card.

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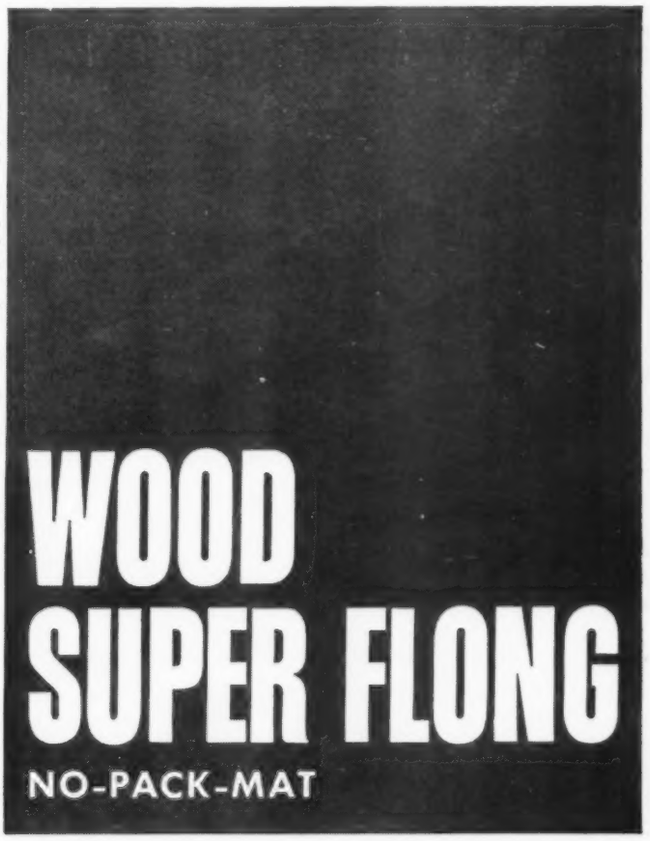

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For More Information Circle 11 on Reader Service Card

Future of the Weekly Newspaper

(Continued from Page 41)

continue to increase if only because of the economies provided by concentrating printing volume and specializing. The concentration of printing indicates that a reduction in the number of printing plants now printing weeklies may take place.

Future equipment plans of publishers are listed in Table III. Most of these plans should be acted upon within the next five years. With the exception of the web offset equipment, most of the equipment will, in all likelihood, be second hand. Major deterrents to new equipment are: (1) High cost of presses coupled with the lack of capital available to publishers; (2) Lack of demand for obsolete trade-in presses which prevents liberal trade-in allowances.

It is significant to note that 44.2% of publishers contemplating press purchases plan to change to the offset process. An interesting comparison can be made when the existing figure of 5.5% indicating present usage of lithography in the weekly field is related to the figure presented above. Even more significant is the figure of 24% which represents publishers who desire a change to web offset.

It has only been a few years since the introduction of this equipment designed especially for weekly newspaper production. The interest shown in both sheetfed and webfed offset is a striking indication of the inroads into this traditional letterpress market.

Two types of web offset presses are currently being used to print weeklies. They differ in construction and the manner by which the impression is made. One type uses a blanket to steel impression cylinder, and the other, called a blanket to blanket type press, utilizes two blankets as impression cylinders.

The blanket to steel press prints only one side of the web at a time. The web is then turned over by means of turnover bars and printed on the other side. The blanket to blanket press, however, feeds a web between two blanket cylinders, each blanket acting as impression cylinder for the other printing unit. With this type of press, simultaneous printing or perfecting, as it is called, is performed.

Generally, the survey revealed that blanket to blanket type presses with the following specifications are preferred:

Cylinder circumference—22½ in.
Maximum roll width—31 in. or 36 in.
Vertical unit construction—One, two, three or four units. Three units are probably the most popular.
Folder type—One former with one right angle jaw and tuck. Quarter folder available as option.
Screen capacity—65 line to 133 line.
Speed, maximum—12,500 i.p.h., minimum—2400 i.p.h.
Approximate price range of available presses designed especially for weeklies and small dailies—Two unit, $45,000-$60,000. Four unit, $75,000-$100,000.

The production possibilities of this type of web offset press are numerous. For example, a three unit press with the above specifications could print a standard page size of 15½ in.—18 in. by 22½ in., 12 pages one color, or 8 pages divided into 4 pages two color and four pages one color. It would be able to produce a tabloid page size of 11¼ in. by 15½ in.—18 in., 24 pages one color, or 16 pages divided into 8 pages two color and 8 pages one color, or 8 pages three color. Approximately 12,000 i.p.h. in any of the above paging combinations could be produced.

NEXT MONTH: *Advantages and disadvantages of web offset printing presses as listed by publishers are discussed. Possible future applications of this equipment in the newspaper industry are given as well as the suitability of web offset to small daily newspapers.*

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Cold Composition Tabloid

(Continued from Page 61)

spread of the tabloid *Monitor*. The grid is divided into five 11 pica columns, and ½ in. cross lines for more accurate positioning of copy.

When the dummy pasteup has final approval, the reproduction pasteup is then prepared. In this case, the layout sheet is identical in size and format, but the grid lines are blue so they will not reproduce on camera. The paper stock is somewhat heavier for ease in handling. This final pasteup is made using the original paper positives from the photographic unit.

A Question Answered

Why not make the pasteup direct with the original paper positive and skip one layout operation? "Actually this could be done," general manager Joseph J. Bernstein says, "but in newspaper operation last minute changes are frequent. Since the paper positive will be reproduced by camera, we prefer the least possible handling. With a preliminary pasteup we can make changes and trial layouts quickly and with ease."

Cross lines are drawn on the reproduction pasteup as a guide for line scribing on the negative. Red paste-down blocks are inserted on the pasteup to show where photos are to be stripped in, as the red reproduces a clear spot on the negative for photo positioning. The assembled two page flat spreads are then taken to the Great Lakes Engraving Co. plant in the same building and shot as line copy on a 20 in. by 24 in. camera.

The negative two page flat is mounted on standard goldenrod masking paper and the lines scribed, opaqued, and the screened halftones inserted. The goldenrod flats are then exposed on a 45 in. by 35 in. Brown platemaker and the image burned in on the offset plates. Various types of plates have been used, such as the customary zinc and some bi-metallics. The preference is for 3M presensitized plates which have been found economical and enable production of excellent quality and fine detail.

After gumming and developing, the plates are sent to a trade printer specializing in newspaper production by offset for the Northwest Ohio area. (See PRINTING PRODUCTION, April 1959, page 29.)

Negatives Sent Separately

The set of negatives is sent separately to the printer by other means so that in the event of delivery delay, or plate damage on the press, another set of plates can be made in the printer's shop without interrupting the presswork schedule.

Yakobian's first edition of the *Monitor* appeared in September 1959. Within a year the newspaper has become solidly established in Toledo. Quite apart from the editorial merits of Yakobian's emphasis upon strong business news coverage, much of it was made possible by skillful use of photocomposition methods. Operating costs are reduced; thereby making a new newspaper publishing venture strongly competitive financially.

Hammond RPM-12

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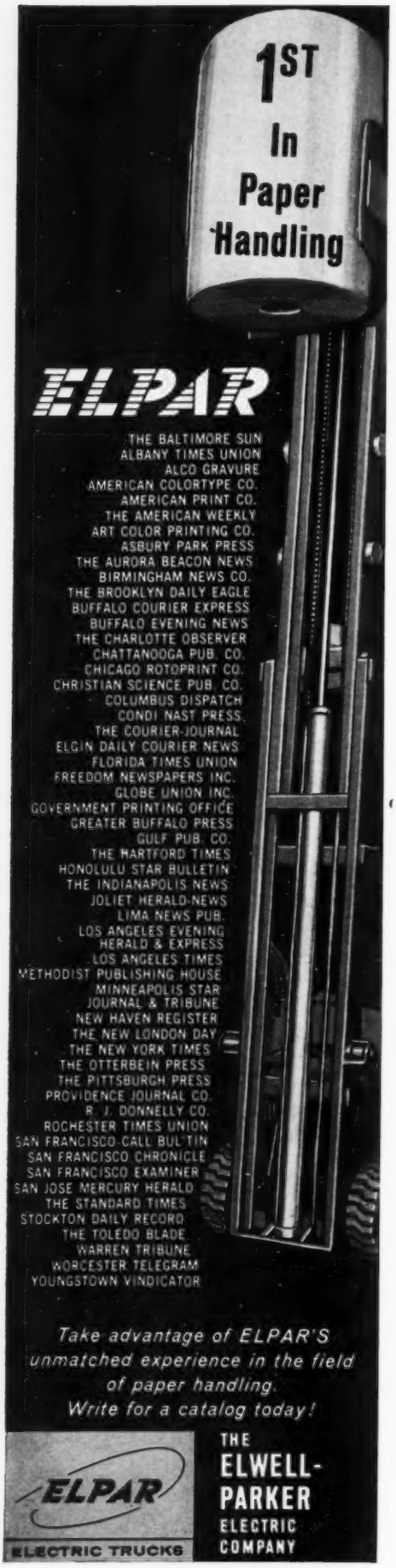

4036 St. Clair Ave., Cleveland 3, Ohio

Circle 46 on Reader Service Card

Litho's Gain in Packaging

(Continued from Page 50)

as some of the inking of the plate.

Some of the advantages claimed for the system are its ability to re-establish the ink-water balance quickly on the press, and ease of press operation. The latter advantage is attained through elimination of the need for critical adjustments in the dampening unit. The system also allows use of softer inks. At present, this system is being tried in a number of plants. If the advantages claimed for the system are valid, it could result in considerable cost savings in packaging even though the system is rather expensive. Savings could be made in the use of cheaper grades of board and by eliminating the need for using large quantities of waste sheets at each press stop. The system would also increase production by eliminating critical adjustments in the dampening system and relieving the pressman of his anxiety over ink-water balance.

The use of blankets in offsetting the impression from the plate to the board has been cited as an important advantage of lithography in board printing. The blanket makes up for moderate variations in surface characteristics and caliper of the board. When these get excessive, however, ordinary blankets cannot compensate for them and variations in printing and impression quality result.

Disposable Blankets

A new disposable blanket known as the Polyfibron blanket has been developed by Dewey and Almy Chemical Co., Cambridge, Mass., which shows promise of eliminating this problem. The new blanket consists of two parts: a rubber impregnated fabric carcass similar to the ordinary blanket and a compressible fibrous top member coated with rubber composition on the surface. Each part is about 0.032 in. thick, or half the thickness of an ordinary blanket. The top member is backed with a pressure sensitive adhesive so it can be attached to the carcass on the press. When damaged, it can be readily removed and a new top surface attached to the carcass.

The disposable feature of this blanket is a valuable one, especially from the standpoint of cost replacement, but it is not the most important one. The fibrous top member of this blanket is more compressible than rubber without unduly increasing pressure.

Better conformability to rough surfaces should be possible with this blanket than with ordinary blankets because greater squeeze between blanket and board does not result in much higher pressure. Too much squeeze between ordinary rubber blankets and board results in degradation of quality from slurred printing because of the increased impression pressure. Printing from the Polyfibron blanket appears to be relatively free of slur even with twice the normal impression squeeze. With this new blanket it should be possible to get greater consistency of impression and better quality of reproduction in printing on board as well as on paper.

Packaging and Balanced Inks

Another significant development in lithography has been the work LTF has done on the evaluation of process colors and the recommendation of balanced inks. These developments can be responsible for appreciable improvements in the quality of the reproduction of process color subjects on packages. They can also result in savings in preparation cost of materials for reproduction purposes.

LTF's recommendations of balanced inks and the method of evaluating process colors are the result of its survey in 1956 and 1957 of color reproduction in the United States and Canada. Of 250 samples of printing evaluated, about a dozen were on board. The results of this survey showed that little effort was being made by the industry in general to select inks with proper colors for best reproduction of colored subjects. There was also little effort to control the strength or color of overprinting inks.

A similar survey should be made of the printing from all package producers to determine what, if any, problem areas exist and how they can be corrected. Such a survey is now being considered by package producers in the United States. Perhaps Canadian producers can also be included in the survey when it is made.

One of the most important developments in research now is the work that is going on to control the quality of reproduction automatically during a pressrun. Color and quality control on board are still serious problems in lithography. LTF has made an exhaustive study of the quality of halftone images and how it can be defined and measured objectively. Factors affecting quality are interference patterns, like graininess, mottle, moire, etc.; image definition, such as sharpness and resolution, and tone and color reproduction.

LTF Executive Committee Meets in Cleveland—The executive committee of the Lithographic Technical Foundation recently held a meeting in Cleveland. Host for the session was George C. Houck, president of Harris-Seybold Co., Div. of Harris-Intertype Corp. Attending the meeting were, reading clockwise from center foreground: Charles Shapiro, Robert Wolff, William H. Webber, Herbert E. Brod, Charles F. Roberts, Naomi Berber, William H. Bulkeley, Michael Bruno, U. Gordon Colson, J. L. Kronenberg, Lorne B. Campbell, M. J. Hoover, Felton Colwell and George C. Houck.

Measurement of Factors

A recording microdensitometer has been built to measure these factors, but it is a slow, cumbersome instrument to use in production. A print quality instrument is being designed that will measure these factors at press speeds, and can be used for quality control. Eventually it can be put directly on the press.

Along with the study of measurement of quality factors, a study is also being made of means to control each factor. Once the instrument for measuring these factors is available and means have been developed for controlling them, it should be possible to control consistency of color and quality automatically on the press. This assumes that the factors lend themselves to mathematical or statistical analysis and that electronic computers can be used. This will mean automation of quality control and elimination of the serious problem of inconsistency in color and quality of reproduction.

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Circle 9 on Reader Service Card

Wrap-around Experience

(Continued from Page 51)

point where there is insufficient printing pressure.

We operate the press at a speed of approximately 7000 sheets per hr. The uniformity of color throughout the run is excellent. It is our considered opinion that the wrap-around method of printing, more especially the printing of color process illustrations where uniformity of color is so vital, holds definite advantages over other processes.

Needed Improvements

The greatest deterrent to the process at the present time is the plates. The only practical process commercially available at the present time for producing plates large enough for this press is the Dow powderless etching process on zinc.

Most of you know that zinc is not the preferred metal on which to etch process plates by any method. This is especially true with the zinc alloys now available. Most of them are too hard and have too much "spring" to provide a smooth, even conformity to the cylinder. This is especially true where there are deep and shallow etched areas on the plate. The heavier portions of the plate adjacent to thinner etched areas do not readily conform to a smooth printing line.

We have etched plates on thin copper in smaller sizes that gave excellent results on this press. However, there is not available at the present time a powderless copper etching machine large enough to etch plates for this press.

We have not had an opportunity to try photopolymer plates and can give no specific information on the practicability of these plates. We see no valid reason why the photopolymer plate should not be practical for the wrap-around press, especially if the soluble polymer material is kept to from 0.006 in to 0.010 in. thickness, and is laminated to a base that is soft and pliable. For example, we mention a 0.010 in to 0.012 in thickness aluminum offset plate.

In summing up, our experience indicates that the greatest need for the universal success of the wrap-around process is a malleable thin plate, etched to a depth of 0.005 in to 0.007 in. so that it will wrap around and conform to the plate cylinder in a smooth, even printing line. Also, we need a blanket that not only has the proper surface for accepting ink from the rollers, but will give it up to the plate in a smooth, even film, and one that is held to very close tolerances in over-all thickness.

Tominey Heads Supplymen

Francis J. Tominey of Boston was elected president of the International Supply Salesmen's Guild last month at the association's annual convention held in Atlanta.

Tominey, who is business manager of *New England Printer & Lithographer*, succeeds Herbert L. Mitchell of Los Angeles.

Other officers elected are: First vice president, Charles S. Tompkins of Tompkins Printing Equipment Co., Detroit; second vice president, Harry J. Deck of Deck-Kuehn & Assoc., Chicago; secretary, Amy Williams, Los Angeles; treasurer, John Morehouse, Harris-Seybold Div. of Harris-Intertype Corp., Cleveland.

Sun Chemical Opens Cincinnati Ink Plant—Shown is the new plant of the General Printing Ink Div., Sun Chemical Corp., located in Woodlawn, O., a suburb of Cincinnati, Robert Reid, veteran Sun employee, has been appointed manager.

Craftsmen Offset Clinics

(Continued from Page 63)

establishment, a rubber printing plate proofing employee was selected for pasteup duties. A regular hot metal makeup man was selected later to work in the pasteup department also. After operating with these two men for a time, the procedure worked out satisfactorily. Bachorz commented that in this instance he would rather have a man who would question anything which appeared irregular such as a misplaced 2 pt. lead in the pasteup.

All copy coming into the plant is completely ready for markup. All measures in the layout are marked in picas and points. Type and cut proofs are wax backed. The lineup man does the keyline lockup. There is no guesswork in the makeup since everything is marked in picas.

Some makeup is done in the art department because in a few cases immediate reduction of the copy is required.

The biggest problem is in training people who have always handled hot metal elements to handle paper and pen properly. For some standard work, layout paper is furnished with 1/8 in. and 1/4 in. faint rulings. Apco proofing paper and Martin Driscoll W3590 black ink are used. Model 2704 Bruning photo table is used for paste makeup work.

Panelist John Jay of Superior Type, Inc., talked about paste makeup in relation to photocomposition. In his plant, over 95% of the work is done by paste makeup. However, the immediate problem is the falling of the work into incompetent hands. The firm recently installed the Linofilm phototypesetting system.

Markup Must Be Complete

In the Superior Type plant, the former lockup department is now the makeup department. Jay observed that in photocomposition, efficiency of the markup department will have to be increased to help speed the makeup of jobs. He also observed that all type metal storage and galleys are eliminated. The speaker stressed necessity for hiring well trained men capable of composing a job mentally while marking up copy. He also stressed that when going into phototypesetting and composition the personnel will have to be trained—from operator to photographer, as well as the men employed for pasteup work. Time is required for employees to pick up speed and accuracy.

Panelist William Woollen of Southern Photo Process Engraving Co., Atlanta, said that spacing the layout properly for a job is a big problem. For that reason, you must have a man who uses taste in putting together a pasteup. He must appreciate the tolerances permissible and be cognizant as to what careless work costs in time and money.

Woollen advised that when installing a photocomposition system, the working section should be thoroughly cleaned and painted. Air conditioning should be provided in the department along with the proper tools. He stressed use of stable base film, such as Mylar, for color work.

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For More Information Circle 150 on Reader Service Card

7.25 Million Print Order

(Continued from Page 56)

the importance of maintaining schedules," Ferg said.

Producing the program sections of the editions published in Philadelphia involves setting type for more than 500 pages by Radnor Graphic Arts, making corrections, dispatching copy to Philadelphia, etching cylinders and printing several million copies within a matter of hours.

Large Bindery and Mailroom

A large bindery and mailroom geared to a tremendous volume of magazines per day is in operation at the Triangle Publications plant. There is also an enclosed railroad siding accommodating up to 17 freight cars at one time which permits paper delivery direct to the plant. An installation which blows waste paper through ducts at speeds up to 70 m.p.h. is another feature. Laboratories for checking each operation of the rotogravure process are also maintained by the company.

As an example of the cooperation and coordination between magazine and printer, the New York metropolitan edition does not close for copy until 2 p.m. on Mondays, yet is on the press early that evening. Copies of the issue are on sale in certain parts of New York City the following morning. Triangle personnel, working through the night, turn out more than one million copies destined for the huge metropolitan New York market. These copies are dispatched not only to wholesalers, but also via the U. S. Postal System to subscribers.

Last spring, a special challenge arose and was solved after much study and thought. It involved the publication of a unique insert in 17 regional editions of the May 7 issue of *TV Guide* containing an actual sample of a food product.

The job was done for the Curtiss Candy Co., Chicago, makers of Miracle Aid, a concentrated fruit flavored drink. It is believed to be the first time that a food product sample has been inserted in a magazine. The insert, containing the sample of Miracle Aid was used in 750,000 copies of editions from Virginia to Florida and Texas. The sample was repeated in the June 18 issue of *TV Guide* for the same area.

Sample In Powder Form

Several of Miracle Aid's nine flavors were used in the inserts. The 5/16 oz. sample, in powder form, was enclosed in a package 3 in. wide and 4¾ in. deep. The envelope type package was made from an extruded lamination of paper and polyethylene which was used to prevent the possibility of evaporation of the powdered sample. The package was converted and printed by multicolor gravure by Dobeckmun Company, Div., Dow Chemical Co., Oak Park, Ill.

The package was tipped in the insert by D. F. Keller Co., Chicago, who also printed the center spread advertisement by offset in two colors. The insert—on 72 lb. index—was a heavier stock than the normal magazine page. Keller hired extra binders to do the tipping in job, all by hand. A total of 21 working days was involved in this work.

Initial plans called for the sample envelope to include enough concentrate to make 2 qts. of the drink, but it was found in tests that this created a bulk problem in binding. It was decided to limit the sample to the 5/16 oz. size which makes only 1 qt.

Inserts Printed Two Up

Inserts were printed two up and it was found necessary to stagger the placement of the envelopes. One package was placed on the right side of the top binding and the other on the left side of the bottom binding in order to gain proper balance on the binding machines.

The insert was bound into newsstand editions published by Triangle Publication's Philadelphia plant, plus *TV Guide's* outside printers in several other cities. Quinn and Arthur Hunter, advertising production manager, coordinated the production details for the insert.

Hand feeding had to be employed to bind the inserts in some plants, while in others it was done automatically. Equipment had to be adjusted to meet special needs. Assistance in that direction came from the technical service sales staffs of the Sheridan and McCain organizations, two bindery equipment companies.

The idea was conceived by Curtiss' advertising department and its advertising agency, Clinton E. Frank, also of Chicago. Printers, binderies and packaging people in various sections of the country were involved in the project, which was coordinated by the production executives of *TV Guide* at Radnor, Pa., and the gravure division in Philadelphia.

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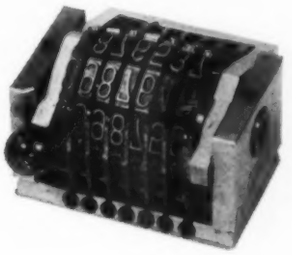

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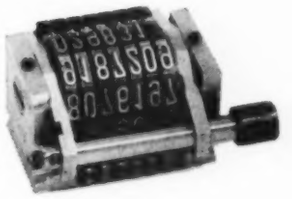

Write or call Roberts Numbering Machine Division, Heller Roberts Manufacturing Corp., 700 Jamaica Ave., Brooklyn 8, N. Y. Telephone Midway 7-4600

For More Information Circle 76 on Reader Service Card

Pleasing Color

(Continued from Page 43)

one principal mask is made for use with all three separation negatives. In the majority of color masking techniques two or three principal masks are used. It may sound unbelievable only one mask is used for the correction of three separations. In fact, this is the focal point of the whole technique.

We repeat that the objective of the technique is to produce *Pleasing Color* at minimum cost and not an exact facsimile of the original. Therefore one mask is needed to accomplish enough color correction for the majority of the subjects. Our experience has shown that a mask made through a No. 85B filter, together with a neutral density filter, gives sufficient color correction by reducing unwanted color and adding color saturation as needed.

The mask (Fig. 3) is prepared by punching a piece of Kodak Separation Negative P.B. Film, or Kodak Pan Masking P. B. Film, emulsion side up, and by placing it emulsion side down on the back side of the transparency in the contact register printing frame.

Some unsharpness in the mask is desired for ease of register and to avoid hard edges or outline effects. There are two methods of making diffused or unsharp masks. One is the rotating method in which the diffused effect is obtained by placing the printing frame on a turn table which is rotated during exposure. The light source used is the Kodak Adjustable Lamp which is placed 6 ft. above and 2 ft. from the frame as shown in Fig. 4. When the frame is rotated, light strikes at an angle and the diffused effect is obtained. Incidentally, this horizontal displacement of the frame varies with the degree of the final enlargement of the original.

Table I can be used as a reference chart for this purpose.

The other method of making unsharp masks is to place a 0.007 in. matte film spacer between the transparency and the film. The light source is placed directly above the printing frame at a distance of 3 ft. The spacer provides the right amount of unsharpness in the mask.

Although both methods can be used for the preparation of unsharp masks, the rotating method is particularly recommended if an improved definition is desired.

In the present case the rotating method of making unsharp masks has been used. Recorded exposure and development data are shown in Table II.

It is necessary also to mention that the figures for exposure and

TABLE I.

Size of Reproduction	Horizontal Displacement of Printing Frame
Same size	2 ft.
2 x enlargement	1 ft.
4 x enlargement	6 in.

TABLE II.

Filter	Light Source	Exposure	Type	Dil.	Development Time	Temp.
No. 85B + N.D. .06	100 W. at 8 V.	15 sec.	DK 50	1 & 2	3¾ min.	68 deg. F.

development in Table II were carried with the purpose that the mask should have a density between 0.25 and 0.35 in step B, and that the density range between A and B will be 45% to 50% of B minus A on the photographic step tablet. A tolerance of plus and minus 0.03 in the step of B, and 0.05 in the range is allowed. However, if the mask ranges outside these limits, it must be remade. If this becomes necessary, we must remember that any increase or decrease in the bottom density or the density of step B is governed by an increase or decrease in exposure and that any increase or decrease in the density range is accomplished by an increase or decrease in development times. The mask in this case, when checked on the densitometer, gave the following readings:

Density of step B 0.26
Density of step A 1.30
Range between A and B 1.04

As the above densitometer readings fall within our required limits, we can now proceed to prepare separation negatives. The mask, thus prepared, is placed emulsion side up into the contact register printing frame, and the transparency is placed over it emulsion side up into the register pins. Three continuous tone separation negatives are made on Kodak Separation Negative P.B. Film through Kodak Wratten Filters Nos. 29, 61 and 47B by placing the printing frame directly under the exposing lamp.

NEXT MONTH: *Details on making separation negatives and converting them into screen positives.*

Stern Sponsors Civil War Display—Edward Stern and Co., Philadelphia printing firm, recently sponsored a display of rarely seen Civil War articles. Pictured are Gordon H. Jones (left), vice president, Western Savings Fund Society, in whose window the display appeared, and Walter Arader, Stern president.

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SEPTEMBER 1960

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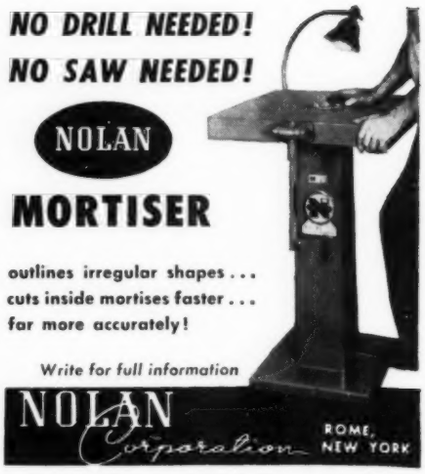

Circle 197 on Reader Service Card

Education Council Offers Color Aptitude Test Kit

The Inter-Society Color Council Aptitude Test is being offered on a loan basis to members of the Education Council of the Graphic Arts Industry.

According to the council, the aim of the test is to measure the color skill, actual and potential, of people whose jobs require accurate and rapid judgments of color matching. It is recommended for evaluating employees for color aptitude, for advancing men in color work, and for checking employees engaged in color work.

A period of one hour is required for taking the test. Cost of borrowing the test for one week is $15, plus insured shipping costs from and to Washington, D. C.

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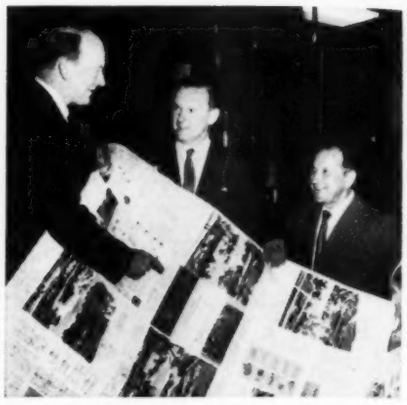
Editor, PRINTING PRODUCTION
1276 W. Third St., Cleveland 13, Ohio.

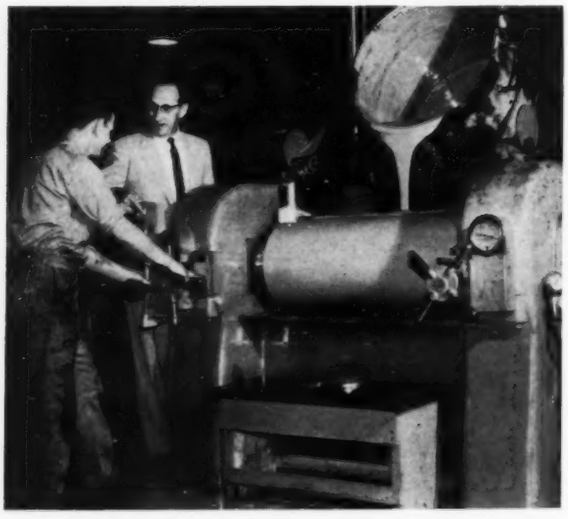
Virginia Newspaper Published by Offset—Walter B. Potter (center)), editor and publisher of the Culpeper (Va.) *Star-Exponent*, examines the first edition run on the new Goss Suburban web offset newspaper press. Published in a new location, the edition carried the first color advertisement ever printed in the newspaper. Plant and Goss personnel examine the edition with Potter.



Australians Tour the Printing World—Representatives of Wilke & Company, Ltd., largest commercial printing firm in Australia, recently viewed modern printing methods at Edward Stern & Co., commercial and publication printers in Philadelphia. The Australians are touring the world's leading printing firms. Left to right, are: James Keightly, Stern, and George B. Thompson, general manager, and Wm. Keppell, offset manager, Wilke.

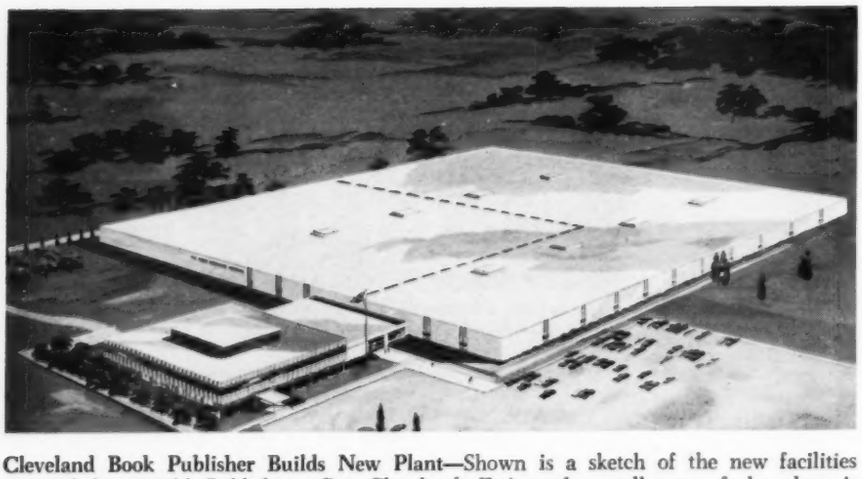
GRAPHIC VIEWS

of the Printing Industry



Sun Modernizes Los Angeles Plant—A. E. Cottril, right, general manager, watches as Sal Fontana operates a printing ink grinding mill in the newly modernized Los Angeles plant of Sun Chemical Corp. The plant, which covers 27,000 sq. ft., was opened recently in connection with the 1960 Western Packaging Exposition.

Wins RIT Quality Control Award—Dr. Carl E. Noble, right, Kimberly-Clark Corp., receives the third annual statistical quality control award from Harold M. Kentner, director of extended services, Rochester Institute of Technology. The award was made during the recent Statistical Quality Control meeting at RIT.



Cleveland Book Publisher Builds New Plant—Shown is a sketch of the new facilities planned for World Publishing Co., Cleveland. Estimated overall area of the plant is 360,000 sq. ft. Construction of the 75,000 sq. ft. printing and folding facility is scheduled to begin in the fall of 1960. Cost of the first unit is estimated at $1 million.

NYEPA Welcomes 1000th Member—Sol Roskin, right, president, Process Lithographers, Inc., was recently welcomed into the New York Employing Printers Assn. as the organization's 1000th member. Greeting him is Jesse J. Lehman, Georgian Press, Inc., association secretary.

Hammond BENCH Glider

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Our NEW BENCH GLIDER with a raising and lowering saw spindle handles all slug and plate sawing operations.

- The BENCH GLIDER has all of the GLIDER'S famous features — Glider Ball Bearing Table — New All-Purpose Saw Guard — Micrometer Gauge Available in 78, 100 and 140 Pica Lengths — 7" Opening Workholder Clamp — All Glider Accessories can be used.
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